#### STRUCTURE SEARCH

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=> d his 183
```

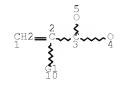
(FILE 'HCAPLUS' ENTERED AT 13:51:18 ON 28 SEP 2009)
L83

28 S L76 OR L79-L82
SAV TEMP L83 BER519HCPA/A

=> d que stat 183

L2 18 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON (100-60-7/BI OR 102-71-6/BI OR 108-91-8/BI OR 109-89-7/BI OR 110-91-8/BI OR 111-42-2/BI OR 124-30-1/BI OR 124-68-5/B I OR 137107-41-6/BI OR 141-43-5/BI OR 35830-10-5/BI OR 471-34-1/BI OR 534-18-9/BI OR 584-10-1/BI OR 75-04-7/BI OR 864970-32-1/BI OR 864970-33-2/BI OR 9003-04-7/BI)

L4 STR



Ak. Cb Ak @7 Cb @9 11 @12

VAR G1=7/9/12

NODE ATTRIBUTES:
CONNECT IS E1 RC AT 4

CONNECT IS E1 RC AT 5

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 9

GGCAT IS UNS AT 12

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1-X10 C AT 6

ECOUNT IS M6 C AT 9

ECOUNT IS M1-X4 C AT 11

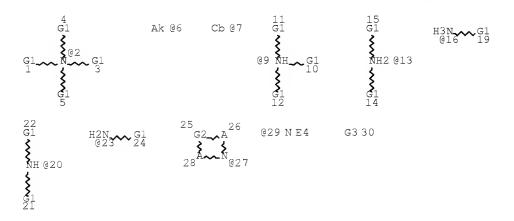
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

ECOUNT IS M6 C AT 12

L12	63799	SEA FILE=REGISTRY	SSS FUL	L4		
L13	626916	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	A1/PG
L14	5826	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	L12 AND L13
L15	3961	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	L12 AND
		?AMMONIUM?/CNS				
L16	3901	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	L12 AND
		?AMINE/CNS				
L17	11353	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	L12 AND
		?SALT/CNS				
L18	878	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	L16 AND L17
L19		STR				



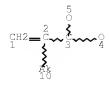
VAR G1=6/7
REP G2=(0-5) A
VAR G3=2/9/13/16/20/23/27/29/NH3
NODE ATTRIBUTES:
HCOUNT IS E4 AT 29
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 27

#### STEREO ATTRIBUTES: NONE 22190 SEA FILE=REGISTRY SUB=L12 SSS FUL L4 AND L19 L22 4666 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L15 OR L18 3023 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L16 NOT L18 L23 L24 15704 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L21 4369 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L22 T<sub>2</sub>5 L26 1664 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L23 L27 16554 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L24 OR L25 L28 10 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L2 AND N/ELS L29 121064 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L28 16798 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L27 OR L26 L30 L31 329 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L29 AND L30 L32 4618 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L25 OR L31 PLU=ON L14 L33 9577 SEA FILE=HCAPLUS SPE=ON ABB=ON L35 117311 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L12 L36 2127 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L35 AND L29 L37 155818 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON AMINES/CT L38 2197 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L35 AND L37 3984 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L36 OR L38 L39 8219 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L32 OR L38 OR L40 L39 L41 QUE SPE=ON ABB=ON PLU=ON HYDROSOLUBL? OR (HYDRO OR WATER OR H2O OR AQUEOUS) (A) SOLUBL? L42 912 SEA FILE-HCAPLUS SPE=ON ABB=ON PLU=ON L40 AND L41 1.43 212 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L42 AND L29 147 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L42 AND L33 L44 338 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L43 OR L44 L45 QUE SPE=ON ABB=ON PLU=ON SUSPEN? OR DISPERS? OR COL L46 LOID? OR EMULS? OR MICROEMULS? OR SLURR? L47 171 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L45 AND L46 L48 STR



NODE ATTRIBUTES:

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 6

NONDER OF NODED	
STEREO ATTRIBUT	ES: NONE
	SEA FILE=REGISTRY SUB=L12 SSS FUL L48
	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L50 AND
	?SODIUM?/CNS
L52 7694	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L50 AND
	ACID/CNS
L53 726	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L51
	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L52
	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L47 AND L53
	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L53 AND L45
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	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L54 AND L45
	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L50 AND
	?POTASSIUM?/CNS
L60 124	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L59
L61 1	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L60 AND L47
L62 4	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L60 AND L45
L63 66	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON (L55 OR L56
	OR L57 OR L58) OR (L61 OR L62)
L64 13321	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L50
L65 351	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L64 AND L29
L66 16	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L65 AND L47
L67 42	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L65 AND L45
L68 67	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L63 OR L66 OR
	L67
L69	QUE SPE=ON ABB=ON PLU=ON PY=<2004 NOT P/DT
	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L68 AND L69
L71	QUE SPE=ON ABB=ON PLU=ON (PY=<2004 OR PRY=<2004 OR
	AY=<2004 OR MY=<2004 OR REVIEW/DT) AND P/DT
	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L68 AND L71
	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L70 OR L72
L74 23	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L73 AND ((L55
T 7F 04	OR L56 OR L57) OR L66)
	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L74 OR L70
	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L75 AND L41
L77 25 <b>6</b> 85	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON DISPERSING AGENTS/CT
L78 45	•
	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L78 AND L77 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L73 AND L77
	SEA FILE-HCAPLUS SPE-ON ABB-ON PLU-ON L66 AND L77
	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L81 AND (L69
102	OR L70)
L83 28	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L76 OR (L79
100	OR L80 OR L81 OR L82)
	or hot or hot,

#### STRUCTURE SEARCH RESULTS

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=> d 183 1-28 ibib ed abs hitstr hitind
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L83 ANSWER 1 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2009:976516 HCAPLUS <u>Full-text</u>

DOCUMENT NUMBER: 151:248179

TITLE: Wetting and dispersing agent

INVENTOR(S): Goebelt, Bernd; Nagel, Carsten; Omeis,
Juergen; Meichsner, Marcus; Walter, Diana

PATENT ASSIGNEE(S): BYK-Chemie GmbH, Germany SOURCE: PCT Int. Appl., 39pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT	PATENT NO.  WO 2009098025					KIND DATE			APPLICATION NO.							
WO 2009						20090813		WO 2009-EP699						2009		
₩:	•		,	•		AT,		,	•		•		•	•		
	ID,	IL,	IN,	ıs,	JP,	GB, KE, LY,	KG,	KM,	KN,	KP,	KR,	KZ,	LA,	LC,		
	MY, RU,	MZ, SC,	NA, SD,	NG, SE,	NI, SG,	NO, SK,	NZ, SL,	OM, SM,	PG, ST,	PH, SV,	PL, SY,	PT, TJ,	RO,	RS,		
RW:	AT,	BE,	BG,	CH,	CY,	US, CZ, LT,	DE,	DK,	EE,	ES,	FI,	FR,	•	•		
	GQ,	GW,	ML,	MR,	ΝE,	TR, SN,	TD,	TG,	BW,	GH,	GM,	KE,	LS,	MW,		
DE 1020	MD, RU, TJ,					,	ZM, ZW, AM, AZ, BY, KG, DE 2008-102008007713						,			
PRIORITY APE	JORITY APPLN. INFO.: DE 2008-102008007713A										2008 0204					

ED Entered STN: 14 Aug 2009

The present invention relates to low-VOC mixts. of at least partially salted copolymers of at least one ethylenically unsatd., Ph group-containing monomer and at least one α,β-unsatd. monocarboxylic acid and/or at least one α,β-unsatd. dicarboxylic acid, of at least one water-soluble polyether, esterification products of at least one water - soluble polyether and an aliphatic dicarboxylic acid and a star polymer, obtainable by the esterification of a carboxylic acid comprising at least three carboxyl groups with at least one water-soluble polyether. The invention further relates to the use of a low-VOC mixture according to the invention as a wetting and dispersing agent, preferably for the production of low-VOC pigment pastes or low-VOC paint systems.

0204

78-41-40, Methacrylic acid, C1-C6 alkyl esters, and other derivs., copolymers with vinyl Ph group-containing monomers 97-65-40, Itaconic acid, copolymers with vinyl Ph group-containing monomers 124-68-5, AMP 90
RL: MOA (Modifier or additive use); USES (Uses) (wetting and dispersing agent for pigments)

RN 79-41-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl- (CA INDEX NAME)

CH2

```
Me_U_CO2H
     97-65-4 HCAPLUS
RN
CM
     Butanedioic acid, 2-methylene- (CA INDEX NAME)
      CH2
 HO2C_U_CH2_CO2H
    124-68-5 HCAPLUS
RN
    1-Propanol, 2-amino-2-methyl- (CA INDEX NAME)
 Me__C__CH2__OH
CC
     42-5 (Coatings, Inks, and Related Products)
     Section cross-reference(s): 38, 46, 48, 66
     wetting dispersing agent arom vinyl carboxylated polymer
     pigment lacquer; polyoxyalkylene ester wetting dispersing
     agent copolymer blend
ΤТ
     Amines
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (alkoxylated, tertiary diamines; wetting and dispersing
        agent for pigments)
ΙT
     Vinyl compounds
     RL: MOA (Modifier or additive use); PRP (Properties); SPN
     (Synthetic preparation); PREP (Preparation); USES (Uses)
        (aryl, polymers; wetting and dispersing agent for
        pigments)
     Polymers
ΤТ
     RL: MOA (Modifier or additive use); PRP (Properties); SPN
     (Synthetic preparation); PREP (Preparation); USES (Uses)
        (block, diblock; wetting and dispersing agent for
        pigments)
TT
     Vinyl compounds
     RL: MOA (Modifier or additive use); SPN (Synthetic preparation);
     PREP (Preparation); USES (Uses)
        (carboxy-containing, polymers, aromatic, alkali metal, alkaline earth
        metal, and ammonium salts; wetting and dispersing
        agent for pigments)
TТ
     Epoxides
     RL: MOA (Modifier or additive use); USES (Uses)
        (copolymers containing ethylene oxide; wetting and
        dispersing agent for pigments)
TT
     Solutions
        (cosmetic, dispersants for solids for; wetting and
        dispersing agent for pigments)
ΙT
     Anhydrides
     RL: MOA (Modifier or additive use); USES (Uses)
        (cyclic, \alpha,\beta\text{-unsatd.,} copolymers with vinyl Ph
        group-containing monomers; wetting and dispersing agent
        for pigments)
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ΤТ
     Polyethers
     RL: MOA (Modifier or additive use); USES (Uses)
        (di-Me siloxane-; wetting and dispersing agent for
        pigments)
ΙT
     Polysiloxanes
     RL: MOA (Modifier or additive use); USES (Uses)
        (di-Me, polyether-; wetting and dispersing agent for
        pigments)
ΙT
     Carboxylic acids
     RL: MOA (Modifier or additive use); USES (Uses)
        (dicarboxylic, esters, esters with water-sol
        . polyethers; wetting and dispersing agent for
        pigments)
TТ
     Fatty acids
     RL: MOA (Modifier or additive use); USES (Uses)
        (dimer acids, from Cl2-C22 acids, esters with water-
        soluble polyethers; wetting and dispersing agent
        for pigments)
ΙT
     Cosmetics and personal care products
     Inks
        (dispersants for pigments for; wetting and
        dispersing agent for pigments)
     Cosmetic creams
ΙT
     Cosmetic gels
     Cosmetic lotions
     Cosmetic sprays
        (dispersents for solids for; wetting and
        dispersing agent for pigments)
     Carbon black
IΤ
     RL: TEM (Technical or engineered material use); USES (Uses)
        (dispersions and lacquers containing; wetting and
        dispersing agent for pigments)
ΙT
     Polyethers
     RL: MOA (Modifier or additive use); USES (Uses)
        (esters of; wetting and dispersing agent for
        pigments)
    Polyoxyalkylenes
ΙT
     RL: MOA (Modifier or additive use); PRP (Properties); SPN
     (Synthetic preparation); PREP (Preparation); USES (Uses)
        (esters; wetting and dispersing agent for pigments)
ΤТ
    Amines
     RL: MOA (Modifier or additive use); USES (Uses)
        (hydroxy-containing, water-soluble diesters;
        wetting and dispersing agent for pigments)
ΙT
    Lacquers
     Pastes
        (low-VOC, wetting agents and dispersants for; wetting
        and dispersing agent for pigments)
IΤ
     Luster
        (of dried lacquer films; wetting and dispersing agent
        for pigments)
ΙT
     Saponification
        (of hydroxy groups in polymers; wetting and dispersing
        agent for pigments)
     Films
IΤ
     Viscosity
        (of prepared lacquer; wetting and dispersing agent for
        pigments)
ΙT
     Amines
     RL: MOA (Modifier or additive use); USES (Uses)
        (polyamines, nonpolymeric, carboxylic acid-containing adducts,
        esters with water-soluble polyethers; wetting
        and dispersing agent for pigments)
IT
     Alcohols
     RL: MOA (Modifier or additive use); USES (Uses)
        (polyhydric, esters, carboxylic acid and amide-containing; wetting
        and dispersing agent for pigments)
```

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ΤТ
    Lactones
     RL: MOA (Modifier or additive use); USES (Uses)
        (polymers, C3-C10, copolymers containing ethylene oxide; wetting
        and dispensing agent for pigments)
     Quaternary ammonium compounds
     RL: MOA (Modifier or additive use); SPN (Synthetic preparation);
     PREP (Preparation); USES (Uses)
        (polymers, alkoxylated quat. ammonium cations; wetting and
        dispersing agent for pigments)
ΙT
     Polymers
     RL: MOA (Modifier or additive use); SPN (Synthetic preparation);
     PREP (Preparation); USES (Uses)
        (star-branched, polyester; wetting and dispersing
        agent for pigments)
TТ
     Fatty acids
     RL: MOA (Modifier or additive use); SPN (Synthetic preparation);
     PREP (Preparation); USES (Uses)
        (tall-oil, copolymers with Pluriol A 750 E; wetting and
        dispersing agent for pigments)
ΙT
     Fatty acids
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (tall-oil; wetting and dispersing agent for pigments)
ΙT
    Amides
     RL: MOA (Modifier or additive use); USES (Uses)
        (unsatd., polymers with Ph group-containing vinyl monomers; wetting
        and dispersing agent for pigments)
ΙT
     Carboxylic acids
     RL: MOA (Modifier or additive use); PRP (Properties); SPN
     (Synthetic preparation); PREP (Preparation); USES (Uses)
        (unsatd., polymers, mono- and di-basic acids; wetting and
        dispersing agent for pigments)
IΤ
     Fatty acids
     RL: MOA (Modifier or additive use); USES (Uses)
        (unsatd., trimers, from Cl2-C22 acids, esters with
        water-soluble polyethers; wetting and
        dispersing agent for pigments)
ΙT
    Dispersing agents
     Wetting
     Wetting agents
        (wetting and dispersing agent for pigments)
TT
     9038-95-3, Pluriol A 2300PE
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (Pluriol A 2300PE; wetting and dispersing agent for
        pigments)
ΙT
     147-14-8, Heliogen Blue L7101F 385388-55-6, Tronox CR 826
     RL: TEM (Technical or engineered material use); USES (Uses)
        (dispersions and lacquers containing; wetting and
        dispersing agent for pigments)
IΤ
     654636-62-1, BlocBuilder
     RL: CAT (Catalyst use); USES (Uses)
        (to make diblock copolymer; wetting and dispersing
        agent for pigments)
     57-55-6, Propylene glycol, uses 57-57-8D, Propiolactone,
     copolymers containing ethylene oxide 75-21-8D, Ethylene oxide,
     copolymers, derivs. 79-10-7D, Acrylic acid, C1-C6 alkyl esters,
     and other derivs., copolymers with vinyl Ph group-containing monomers
     79-41-40, Methacrylic acid, C1-C6 alkyl esters, and other
     derivs., copolymers with vinyl Ph group-containing monomers
     97-65-4D, Itaconic acid, copolymers with vinyl Ph
     group-containing monomers
                                97-65-4D, Itaconic acid, ester,
     amide, or other derivs., copolymers with vinyl Ph group-containing
     monomers
               100-42-5D, Styrene, copolymers with carboxy-containing
     \alpha, \beta-unsatd. carboxylic acid monomers and their derivs.
     108-29-2D, copolymers containing ethylene oxide
                                                       108-30-5D, Succinic
     anhydride, esters with water-soluble polyethers
```

108-31-6D, Maleic anhydride, copolymers with vinyl Ph

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group-containing monomers
                                108-31-6D, Maleic anhydride, ester, amide,
     or other derivs., copolymers with vinyl Ph group-containing monomers,
     uses 110-16-7D, Maleic acid, copolymers with vinyl Ph
     group-containing monomers 110-16-7D, Maleic acid, ester, amide, or
     other derivs., copolymers with vinyl Ph group-containing monomers
     110-17-8D, Fumaric acid, copolymers with vinyl Ph group-containing
     monomers 110-17-8D, Fumaric acid, ester, amide, or other
     derivs., copolymers with vinyl Ph group-containing monomers
     122-60-1D, Phenyl glycidyl ether, copolymers containing ethylene oxide
     124-68-5, AMP 90
                      502-44-3D, \varepsilon-Caprolactone,
                                           556-52-5D, Glycidol, ethers
     copolymers containing ethylene oxide
     with up to C17 aliphatic and aromatic alcs., copolymers containing ethylene
     oxide 589-81-1D, 2-Ethylhexane, poly-oxiranylmethoxy derivs.,
     copolymers containing ethylene oxide 937-41-7D, Phenyl acrylate,
     copolymers with carboxy-containing \alpha, \beta-unsatd. carboxylic
     acid monomers and their derivs. 2426-08-6D, n-Butyl glycidyl
     ether, copolymers containing ethylene oxide 2495-35-4D, Benzyl
     acrylate, copolymers with carboxy-containing \alpha, \beta-unsatd.
     carboxylic acid monomers and their derivs. 2495-37-6D, Benzyl
     methacrylate, copolymers with carboxy-containing
     \alpha, \beta-unsatd. carboxylic acid monomers and their derivs.
     4016-14-2D, Isopropyl glycidyl ether, copolymers containing ethylene
     oxide 9003-11-6, Ethylene oxide-propylene oxide copolymer
     25265-77-4, Texanol 25867-06-5, Ethylene oxide-styrene oxide
     copolymer 27517-34-6, Ethylene oxide-butylene oxide copolymer
     172867-85-5, Tafigel PUR 40 192140-50-4, Byk 024 272772-61-9,
     Parmetol A 26 294653-16-0, Byk 028
     RL: MOA (Modifier or additive use); USES (Uses)
        (wetting and dispersing agent for pigments)
     9011-13-6P, Styrene-maleic anhydride copolymer 120293-17-6P
     RL: MOA (Modifier or additive use); PRP (Properties); RCT
     (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent); USES (Uses)
        (wetting and dispersing agent for pigments)
     9004-74-4DP, Pluriol A 750 E, ester reaction products with Pripol
     1022 or tall oil fatty acids 9011-13-6DP, Styrene-maleic
     anhydride copolymer, sodium or potassium or diaminopropylamine or
     alkoxylated quaternary ammonium salts 9038-95-3DP, ester
     reaction products with Pripol 1022 105187-99-3DP, Pripol 1022,
     ester reaction products with Pluriol A 750 E or Pluriol A 2300PE
     709024-68-0DP, Acrylic acid-styrene diblock copolymer, potassium
           862736-37-6P
     RL: MOA (Modifier or additive use); PRP (Properties); SPN
     (Synthetic preparation); PREP (Preparation); USES (Uses)
        (wetting and dispersing agent for pigments)
     632340-34-2, Mowilith LDM 7416
     RL: NUU (Other use, unclassified); TEM (Technical or engineered
     material use); USES (Uses)
        (wetting and dispersing agent for pigments)
     9004-74-4, Pluriol A 750 E
                                37960-66-0, 1,1,3-Propanetriamine
     105187-99-3, Pripol 1022
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (wetting and dispersing agent for pigments)
     1310-58-3, Potassium hydroxide, reactions 1310-73-2, Sodium
     hydroxide, reactions
     RL: RGT (Reagent); RACT (Reactant or reagent)
        (wetting and dispersing agent for pigments)
REFERENCE COUNT:
                         2
                               THERE ARE 2 CITED REFERENCES AVAILABLE
                               FOR THIS RECORD. ALL CITATIONS AVAILABLE
                               IN THE RE FORMAT
L83 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:
                     2009:940622 HCAPLUS Full-text
DOCUMENT NUMBER:
                         151:248176
TITLE:
                        Wetting and dispersing agent
INVENTOR(S):
                        Goebelt, Bernd; Nagel, Carsten; Omeis,
```

TТ

ΤТ

TT

Juergen; Meichsner, Marcus; Walter, Diana

PATENT ASSIGNEE(S): BYK-Chemie G.m.b.H., Germany

SOURCE:

Ger. Offen., 18pp.

CODEN: GWXXBX

DOCUMENT TYPE:

LANGUAGE:

Patent German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PA7	CENT 1	NO.			KIND DATE						DATE				
DE	1020	A1 20090806					7713	2008							
WO	2009	25		A1		2009	0813			2009					
	W:	BY, EC, ID,	AG, BZ, EE, IL, LR,	CA, EG, IN,	CH, ES, IS,	CN, FI, JP,	CO, GB, KE,	CR, GD, KG,	CU, GE, KM,	CZ, GH, KN,	DE, GM, KP,	DK, GT, KR,	DM, HN, KZ,	DO, HR, LA,	DZ, HU, LC,
	RW:	RU, TR, AT, HR, PT,	MZ, SC, TT, BE, HU, RO, GW,	SD, TZ, BG, IE, SE,	SE, UA, CH, IS, SI,	SG, UG, CY, IT, SK,	SK, US, CZ, LT, TR,	SL, UZ, DE, LU, BF,	SM, VC, DK, LV, BJ,	ST, VN, EE, MC, CF,	SV, ZA, ES, MK, CG,	SY, ZM, FI, MT,	TJ, ZW FR, NL, CM,	TM, GB, NO, GA,	TN, GR, PL, GN,
PRIORITY	APP:	MZ, MD,	NA, RU,	SD, TJ,	SL,				ZM,		AM,	AZ,	BY,	KG,	KZ,

2008 0204

ED Entered STN: 06 Aug 2009

The present invention concerns VOC-poor mixts. of at least partially salted copolymers of at least one ethylenically unsatd. Ph group-containing monomer and at least one  $\alpha$ ,  $\beta$ -unsatd. monocarboxylic acid and/or at least one  $\alpha$ ,  $\beta$ -unsatd. dicarboxylic acid, of at least one water-soluble Polyether, transesterification products of at least one water-soluble Polyether and an aliphatic dicarboxylic acid and a star polymer, obtainable by transesterification of one, at least 3 carboxyl groups of an exhibiting carboxylic acid with at least one water-soluble Polyether as well as the use of a mixture, according to the invention, as wetting and dispersing agents, preferably for the production of VOC-poor pigment pastes or VOC-poor lacquer systems.

IT 79-41-40, Methacrylic acid, derivs., copolymers with vinyl Ph group-containing monomers 97-65-40, Itaconic acid, copolymers with vinyl Ph group-containing monomers 124-68-5, AMP 90

RL: MOA (Modifier or additive use); USES (Uses)
 (wetting and dispersing agent for pigments)

RN 79-41-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl- (CA INDEX NAME)

CH<sub>2</sub> Me\_U\_CO<sub>2</sub>H

RN 97-65-4 HCAPLUS

CN Butanedioic acid, 2-methylene- (CA INDEX NAME)

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CH2
 HO2C_U_CH2_CO2H
     124-68-5 HCAPLUS
RN
CN
    1-Propanol, 2-amino-2-methyl- (CA INDEX NAME)
 Me__CH2_OH
CC
    42-5 (Coatings, Inks, and Related Products)
     Section cross-reference(s): 38, 46, 48, 66
     wetting dispersing agent arom vinyl carboxylated polymer
ST
     pigment lacquer; polyoxyalkylene ester wetting dispersing
     agent copolymer blend
     Amines
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (alkoxylated, tertiary diamines; wetting and dispersing
        agent for pigments)
ΙT
     Vinyl compounds
     RL: MOA (Modifier or additive use); PRP (Properties); SPN
     (Synthetic preparation); PREP (Preparation); USES (Uses)
        (aryl, polymers; wetting and dispersing agent for
        pigments)
ΙT
     Polymers
     RL: MOA (Modifier or additive use); PRP (Properties); SPN
     (Synthetic preparation); PREP (Preparation); USES (Uses)
        (block, diblock; wetting and dispersing agent for
        pigments)
ΙT
     Vinyl compounds
     RL: MOA (Modifier or additive use); SPN (Synthetic preparation);
     PREP (Preparation); USES (Uses)
        (carboxy-containing, polymers, aromatic, alkali metal, alkaline earth
        metal, and ammonium salts; wetting and dispersing
        agent for pigments)
IΤ
     Epoxides
     RL: MOA (Modifier or additive use); USES (Uses)
        (copolymers containing ethylene oxide; wetting and
        dispersing agent for pigments)
IT
     Solutions
        (cosmetic, dispersants for solids for; wetting and
        dispersing agent for pigments)
TТ
     Anhydrides
     RL: MOA (Modifier or additive use); USES (Uses)
        (cyclic, \alpha,\beta\text{-unsatd.,} copolymers with vinyl Ph
        group-containing monomers; wetting and dispersing agent
        for pigments)
     Polyethers
ΙT
     RL: MOA (Modifier or additive use); USES (Uses)
        (di-Me siloxane-, Byk 348; wetting and dispersing
        agent for pigments)
ΙT
     Polysiloxanes
     RL: MOA (Modifier or additive use); USES (Uses)
        (di-Me, polyether-, Byk 348; wetting and dispersing
        agent for pigments)
ΙT
     Carboxylic acids
     RL: MOA (Modifier or additive use); USES (Uses)
        (dicarboxylic, esters, esters with water-sol
        . polyethers; wetting and dispersing agent for
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pigments)
ΙT
    Fatty acids
     RL: MOA (Modifier or additive use); USES (Uses)
        (dimer acids, from C12-C22 acids, esters with water-
        soluble polyethers; wetting and dispersing agent
        for pigments)
ТТ
     Cosmetics and personal care products
     Inks
        (dispersants for pigments for; wetting and
        dispersing agent for pigments)
     Cosmetic creams
     Cosmetic gels
     Cosmetic lotions
     Cosmetic sprays
        (dispersants for solids for; wetting and
        dispersing agent for pigments)
ΙT
     Carbon black
     RL: TEM (Technical or engineered material use); USES (Uses)
        (dispersions and lacquers containing; wetting and
        dispersing agent for pigments)
ΤТ
     Polyethers
     RL: MOA (Modifier or additive use); USES (Uses)
        (esters of; wetting and dispersing agent for
        pigments)
ΙT
     Polyoxyalkylenes
     RL: MOA (Modifier or additive use); PRP (Properties); SPN
     (Synthetic preparation); PREP (Preparation); USES (Uses)
        (esters; wetting and dispersing agent for pigments)
ΙT
     Amines
     RL: MOA (Modifier or additive use); USES (Uses)
        (hydroxy-containing, water-soluble diesters;
        wetting and dispersing agent for pigments)
ΙT
    Lacquers
     Pastes
        (low-VOC, wetting agents and dispersants for; wetting
        and dispersing agent for pigments)
ΙT
    Luster
        (of dried lacquer films; wetting and dispersing agent
        for pigments)
ΙT
     Saponification
        (of hydroxy groups in polymers; wetting and dispersing
        agent for pigments)
ΤТ
     Films
     Viscosity
        (of prepared lacquer; wetting and dispersing agent for
        pigments)
ΤТ
     Amines
     RL: MOA (Modifier or additive use); USES (Uses)
        (polyamines, nonpolymeric, carboxylic acid-containing adducts,
        esters with water-soluble polyethers; wetting
        and dispersing agent for pigments)
ΙT
     Alcohols
     RL: MOA (Modifier or additive use); USES (Uses)
        (polyhydric, esters, carboxylic acid and amide-containing; wetting
        and dispersing agent for pigments)
TT
     Lactones
     RL: MOA (Modifier or additive use); USES (Uses)
        (polymers, C3-C10, copolymers containing ethylene oxide; wetting
        and dispersing agent for pigments)
     Quaternary ammonium compounds
ΙT
     RL: MOA (Modifier or additive use); SPN (Synthetic preparation);
     PREP (Preparation); USES (Uses)
        (polymers, alkoxylated quat. ammonium cations; wetting and
        dispersing agent for pigments)
IT
     Polymers
     RL: MOA (Modifier or additive use); SPN (Synthetic preparation);
     PREP (Preparation); USES (Uses)
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(star-branched, polyester; wetting and dispersing
        agent for pigments)
     Fatty acids
ΙT
     RL: MOA (Modifier or additive use); SPN (Synthetic preparation);
     PREP (Preparation); USES (Uses)
        (tall-oil, copolymers with Pluriol A 750 E; wetting and
        dispersing agent for pigments)
ΤТ
     Fatty acids
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (tall-oil; wetting and dispersing agent for pigments)
ΙT
     RL: MOA (Modifier or additive use); USES (Uses)
        (unsatd., polymers with Ph group-containing vinyl monomers; wetting
        and dispersing agent for pigments)
TТ
     Carboxylic acids
     RL: MOA (Modifier or additive use); PRP (Properties); SPN
     (Synthetic preparation); PREP (Preparation); USES (Uses)
        (unsatd., polymers, mono- and di-basic acids; wetting and
        dispersing agent for pigments)
ΙT
     Fatty acids
     RL: MOA (Modifier or additive use); USES (Uses)
        (unsatd., trimers, from Cl2-C22 acids, esters with
        water-soluble polyethers; wetting and
        dispersing agent for pigments)
ΙT
    Dispersing agents
     Wetting
     Wetting agents
        (wetting and dispersing agent for pigments)
IΤ
     147-14-8, Heliogen Blue L7101F 385388-55-6, Tronox CR 826
     RL: TEM (Technical or engineered material use); USES (Uses)
        (dispersions and lacquers containing; wetting and
        dispensing agent for pigments)
ΙT
     654636-62-1, BlocBuilder
     RL: CAT (Catalyst use); USES (Uses)
        (to make diblock copolymer; wetting and dispersing
        agent for pigments)
    57-55-6, Propylene glycol, uses 75-21-8D, Ethylene oxide,
ΙT
     copolymers, derivs. 79-10-7D, Acrylic acid, derivs., copolymers
     with vinyl Ph group-containing monomers 79-41-40,
    Methacrylic acid, derivs., copolymers with vinyl Ph group-containing
               97-65-4D, Itaconic acid, copolymers with
     monomers
     vinyl Ph group-containing monomers 97-65-40, Itaconic
     acid, ester, amide, or other derivs., copolymers with vinyl Ph
     group-containing monomers 100-42-5D, Styrene, copolymers with
     carboxy-containing \alpha, \beta-unsatd. carboxylic acid monomers and
     their derivs. 108-30-5D, Succinic anhydride, esters with
     water-soluble polyethers or diols 108-31-6D,
     Maleic anhydride, copolymers with vinyl Ph group-containing monomers
     108-31-6D, Maleic anhydride, ester, amide, or other derivs.,
     copolymers with vinyl Ph group-containing monomers, uses 110-16-7D,
     Maleic acid, copolymers with vinyl Ph group-containing monomers
     110-16-7D, Maleic acid, ester, amide, or other derivs., copolymers
     with vinyl Ph group-containing monomers 110-17-8D, Fumaric acid,
     copolymers with vinyl Ph group-containing monomers
                                                         110-17-8D,
     Fumaric acid, ester, amide, or other derivs., copolymers with
     vinyl Ph group-containing monomers 122-60-1D, Phenyl glycidyl ether,
     copolymers containing ethylene oxide 124-68-5, AMP 90
     556-52-5D, Glycidol, ethers with up to C17 aliphatic and aromatic alcs.,
     copolymers containing ethylene oxide 589-81-1D, 2-Ethylhexane,
     poly-oxiranylmethoxy derivs., copolymers containing ethylene oxide
     937-41-7D, Phenyl acrylate, copolymers with carboxy-containing
     \alpha, \beta-unsatd. carboxylic acid monomers and their derivs.
     2426-08-6D, n-Butyl glycidyl ether, copolymers containing ethylene
            2495-35-4D, Benzyl acrylate, copolymers with
     carboxy-containing \alpha, \beta-unsatd. carboxylic acid monomers and
     their derivs.
                    2495-37-6D, Benzyl methacrylate, copolymers with
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carboxy-containing  $\alpha,\beta$ -unsatd. carboxylic acid monomers and their derivs. 4016-14-2D, Isopropy1 glycidy1 ether, copolymers containing ethylene oxide 9003-11-6, Ethylene oxide-propylene oxide copolymer 25265-77-4, Texanol 25867-06-5, Ethylene oxide-styrene oxide copolymer 27517-34-6, Ethylene oxide-butylene oxide copolymer 172867-85-5, Tafigel PUR 40 192140-50-4, Byk 024 272772-61-9, Parmetol A 26 294653-16-0, Byk 028 RL: MOA (Modifier or additive use); USES (Uses) (wetting and dispersing agent for pigments) 9011-13-6P, Styrene-maleic anhydride copolymer 120293-17-6P RL: MOA (Modifier or additive use); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (wetting and dispersing agent for pigments) 9004-74-4DP, Pluriol A 750 E, ester reaction products with Pripol 1022 or tall oil fatty acids 9011-13-6DP, Styrene-maleic anhydride copolymer, sodium or potassium or diaminopropylamine or alkoxylated quaternary ammonium salts 9038-95-3DP, ester reaction products with Pripo1 1022 105187-99-3DP, Pripo1 1022, ester reaction products with Pluriol A 750 E or Pluriol A2300PE 709024-68-0DP, Acrylic acid-styrene diblock copolymer, potassium salts 862736-37-6P RL: MOA (Modifier or additive use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses) (wetting and dispersing agent for pigments) 632340-34-2, Mowilith LDM 7416 TΤ RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses) (wetting and dispersing agent for pigments) ΙT 9004-74-4, Pluriol A 750 E 9038-95-3 37960-66-0, 1,1,3-Propanetriamine 105187-99-3, Pripo1 1022 RL: RCT (Reactant); RACT (Reactant or reagent) (wetting and dispersing agent for pigments) 1310-58-3, Potassium hydroxide, reactions 1310-73-2, Sodium ΙT hydroxide, reactions RL: RGT (Reagent); RACT (Reactant or reagent) (wetting and dispersing agent for pigments) REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT L83 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2008:1194538 HCAPLUS Full-text DOCUMENT NUMBER: 149:495900 TITLE: Method for preparation of polymer ceramic dispersant Wang, Haihua; Shen, Yiding; Fei, Guiqiang; Li, INVENTOR(S): Xiaorui PATENT ASSIGNEE(S): Shaanxi University of Science and Technology, Peop. Rep. China SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 13pp. CODEN: CNXXEV DOCUMENT TYPE: Patent LANGUAGE: Chinese FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION: KIND DATE APPLICATION NO. PATENT NO. DATE \_\_\_\_\_ \_\_\_\_ CN 101274242 A 20081001 CN 2008-10017258 2008 0108

PRIORITY APPLN. INFO.:

CN 2008-10017258

2008 0108

ED Entered STN: 06 Oct 2008

The title method comprises mixing polyethylene glycol and maleic anhydride with the molar ratio of 1:0.1-1.2 to obtain solution A, adding acidic solution into solution A with the solid weight ratio of 0.5-10:100, heating to  $30-90^{\circ}$  for 0.5-4 h to obtain esterification product B, mixing the product B, functional monomer and vinyl monomer with the weight ratio of 1:(1-10):(0.1-1.5) to obtain monomer solution C, mixing the solution C, a mol.-weight regulator and water with the weight ratio of 1:(0-0.5):(1-10)to obtain monomer solution D, mixing water and water-soluble initiator with the weight ratio of 1:(0.002-1) to obtain an initiator water solution E, adding the solution E into the solution D at  $40-90^{\circ}$  with the weight ratio of 100:(0.05-20) for 0.1-4 h, adjusting to  $50-95^{\circ}$  to react for 1-6 h to obtain copolymer water solution F, and adjusting pH to 7-13 to obtain polymer ceramic dispersant. The acidic solution is from sulfuric acid, formic acid, acetic acid, and/or oxalic acid. The mol.-weight regulator is dodecyl mercaptan, ethanethiol, triethanolamine, or isopropanol. The title method may decrease the cost, and improve the d. and flexural strength of ceramic product. The title polymer ceramic dispersant may be used for dispersing pigment and paint. ΤТ

IT 79-41-4, Methacrylic acid, reactions 97-65-4, Itaconic acid, reactions 27813-92-1, Hydroxypropyl

methacrylate
RL: RCT (Reactant); RACT (Reactant or reagent)

(method for preparation of polymer ceramic dispersent) RN 79-41-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl- (CA INDEX NAME)

RN 97-65-4 HCAPLUS CN Butanedioic acid, 2-methylene- (CA INDEX NAME)

RN 27813-02-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (CA INDEX NAME)

CM 1

CRN 79-41-4 CMF C4 H6 O2

CM 2

CRN 57-55-6 CMF C3 H8 O2

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102-71-6, Triethanolamine, reactions
ΤТ
    RL: RGT (Reagent); RACT (Reactant or reagent)
        (mol. weight regulator; method for preparation of polymer ceramic
       dispersant)
RN
    102-71-6 HCAPLUS
    Ethanol, 2,2',2''-nitrilotris- (CA INDEX NAME)
CN
             CH2_CH2_OH
 HO_CH2_CH2_N_CH2_CH2_OH
CC
     48-1 (Unit Operations and Processes)
ST
    polymer ceramic dispersant prepn polymn PEG maleic
    anhydride
IΤ
    Ceramics
      Dispersing agents
    Esterification
    Polymerization
        (method for preparation of polymer ceramic dispersant)
TТ
    Polyoxyalkylenes, reactions
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (method for preparation of polymer ceramic dispersant)
     7631-90-5, Sodium bisulfite 7727-21-1, Potassium persulfate
ΙT
     7727-54-0, Ammonium persulfate 7757-83-7, Sodium sulfite
     7772-98-7, Sodium thiosulfate
     RL: CAT (Catalyst use); USES (Uses)
        (initiator; method for preparation of polymer ceramic
       dispersant)
     75-50-3, Trimethylamine, uses 121-44-8, Triethylamine, uses
TT
    144-55-8, Sodium bicarbonate, uses 497-19-8, Sodium carbonate,
    uses 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium
    hydroxide, uses 7664-41-7, Ammonia, uses
     RL: NUU (Other use, unclassified); USES (Uses)
        (method for preparation of polymer ceramic dispersant)
    64-18-6, Formic acid, reactions 64-19-7, Acetic acid, reactions
IΤ
     79-10-7, Acrylic acid, reactions 79-41-4, Methacrylic
     acid, reactions 80-62-6, Methyl methacrylate
                                                    96-33-3, Methyl
    acrylate 97-63-2, Ethyl methacrylate 97-65-4,
    Itaconic acid, reactions 97-88-1, Butyl methacrylate
    Benzenesulfonic acid, alkyl derivs. 98-83-9, Methylstyrene,
     reactions 100-42-5, Styrene, reactions 108-31-6, Maleic
    anhydride, reactions 140-88-5, Ethyl acrylate 141-32-2, Butyl
    acrylate 142-09-6, Hexyl methacrylate 144-62-7, Oxalic acid,
    reactions 818-61-1 868-77-9 1606-80-0, Allylsulfonic acid
    2499-95-8, Hexyl acrylate 3934-16-5, Methallylsulfonic acid
    4813-57-4, Octadecyl acrylate 7664-93-9, Sulfuric acid,
    reactions 25322-68-3, PEG 1000 25584-83-2, Hydroxypropyl
    acrylate 27813-02-1, Hydroxypropyl methacrylate
     32360-05-7, Octadecyl methacrylate
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (method for preparation of polymer ceramic dispersant)
    67-63-0, Isopropanol, reactions 75-08-1, Ethanethiol
TТ
    102-71-6, Triethanolamine, reactions 112-55-0, Dodecyl
    mercaptan
     RL: RGT (Reagent); RACT (Reactant or reagent)
        (mol. weight regulator; method for preparation of polymer ceramic
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ADDITED TON NO

DATE

dispersant)

L83 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2009 ACS ON STN ACCESSION NUMBER: 2007:675510 HCAPLUS Full-text DOCUMENT NUMBER: 147:96074

TITLE: Production of water-soluble anionic polymer dispersions
INVENTOR(S): Han, Sung Wook; Lee, Seung Chul

PATENT ASSIGNEE(S): Green Technology, Inc., S. Korea; Taki

Chemical Co., Ltd.

SOURCE: PCT Int. Appl., 45pp.

CODEN: PIXXD2

KIND DATE

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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- ED Entered STN: 22 Jun 2007
- A water-soluble anionic polymer dispersion comprises a radical copolymer comprising an AB anionic monomer and a nonionic monomer and prepared in salt-containing water in the presence of an ionic dispersant, a radical polymerization initiator, and an anionic surfactant or nonionic surfactant. The anionic polymer disparsion has high solids content, high polymer mol. weight, and low viscosity of the reaction mixture and the final product. Thus, a 50%-aqueous acrylamide solution (101.718), 99% 2-acrylamide-2methyl-1-propanesulfonic acid (131.058), 99% itaconic acid (19.589), 15% poly(sodium acrylate) (53.333), Noigen ET 135 surfactant (4.0), glycero1 (6.0), ammonium sulfate (208.444), and deionized water (420.301 g) were mixed in a reactor, the reactor was purged with nitrogen for 20 min, and the temperature was set at 35°. The polymerization was initiated by adding 1.0 g of a 2%-aqueous VA 044 initiator, the polymerization was carried out for 6 h, the same amount of VA 044 initiator was added again, the polymerization was carried out for addnl. 12 h, and ammonium sulfate (55.556 g) was added to obtain a water-soluble anionic polymer dispersion having an average particle size of  $7~\mu$  and a viscosity of 57~cps.
- IT 102-71-6, Triethanolamine, uses

RL: CAT (Catalyst use); USES (Uses)

(production of water-soluble anionic polymer

dispersions)
RN 102-71-6 HCAPLUS
CN Ethanol, 2,2',2''-nitrilotris- (CA INDEX NAME)

СН2— СН2— ОН НО— СН2— СН2— СН2— ОН

IT 38808-69-4P, Acrylamide-acrylic acid-itaconic acid copolymer 115426-14-7P 942054-57-1P,
Acrylamide-2-acrylamide-2-methylpropanesulfonic acid-itaconic acid-sodium acrylate copolymer 942054-58-2P,
Acrylamide-2-acrylamide-2-methylpropanesulfonic acid-acrylic acid-itaconic acid-sodium acrylate copolymer 942054-59-3P 942054-60-6P 942054-61-7P
RL: IMF (Industrial manufacture); PREP (Preparation)

RL: IMF (Industrial manufacture); PREP (Preparation) (production of water-soluble anionic polymer dispersions)

RN 38808-69-4 HCAPLUS

CN Butanedioic acid, 2-methylene-, polymer with 2-propenamide and 2-propenoic acid (CA INDEX NAME)

CM 1

CRN 97-65-4 CMF C5 H6 O4

CM 2

CRN 79-10-7 CMF C3 H4 O2

CM 3

CRN 79-06-1 CMF C3 H5 N O

H2N\_U\_CH\_\_CH2

RN 115426-14-7 HCAPLUS

CN Butanedioic acid, 2-methylene-, polymer with 2-methyl-2-[(1-oxo-2-propen-1-yl)amino]-1-propanesulfonic acid and 2-propenamide (CA INDEX NAME)

CM 1

CRN 15214-89-8 CMF C7 H13 N O4 S

CM 2

CRN 97-65-4 CMF C5 H6 O4

$$_{\text{HO}_2\text{C}} = \bigoplus_{-\text{CH}_2-\text{CO}_2\text{H}}^{\text{CH}_2}$$

CM 3

CRN 79-06-1 CMF C3 H5 N O

RN 942054-57-1 HCAPLUS

CN Butanedioic acid, 2-methylene-, polymer with 2-methyl-2-[(1-oxo-2-propen-1-yl)amino]-1-propanesulfonic acid, 2-propenamide and sodium 2-propenoate (1:1) (CA INDEX NAME)

CM 1

CRN 15214-89-8 CMF C7 H13 N O4 S

Na

CRN 97-65-4 CMF C5 H6 O4

CRN 79-06-1 CMF C3 H5 N O

RN 942054-58-2 HCAPLUS

CN Butanedioic acid, 2-methylene-, polymer with 2-methyl-2-[(1-oxo-2-propen-1-yl)amino]-1-propanesulfonic acid, 2-propenamide, 2-propenoic acid and sodium 2-propenoate (1:1) (CA INDEX NAME)

CM 1

CRN 15214-89-8 CMF C7 H13 N O4 S

CM 2

Na

CM 3

CRN 97-65-4 CMF C5 H6 O4

CM 4

CRN 79-10-7 CMF C3 H4 O2

CM 5

CRN 79-06-1 CMF C3 H5 N O

RN 942054-59-3 HCAPLUS

CN Butanedioic acid, 2-methylene-, polymer with 2-propenamide and sodium 2-propenoate (1:1) (CA INDEX NAME)

CM 1

CRN 7446-81-3 CMF C3 H4 O2 . Na

CM 2

CRN 97-65-4

CMF C5 H6 O4

CM 3

CRN 79-10-7 CMF C3 H4 O2

CM 4

CRN 79-06-1 CMF C3 H5 N O

RN 942054-61-7 HCAPLUS

CN Butanedioic acid, 2-methylene-, polymer with 2-propenamide, 2-propenoic acid and sodium 2-propenoate (1:1) (CA INDEX NAME)

CM 1

CRN 7446-81-3 CMF C3 H4 O2 . Na

Na

CM 2

CRN 97-65-4 CMF C5 H6 O4

```
CM 3
    CRN 79-10-7
    CMF C3 H4 O2
 но_ Ё_сн__сн2
    CM
        4
    CRN 79-06-1
     CMF C3 H5 N O
 H2N_U_CH_CH2
ΙT
    25086-62-8, Sodium methacrylate homopolymer
    25087-26-7, Poly(methacrylic acid)
     RL: NUU (Other use, unclassified); USES (Uses)
        (production of water-soluble anionic polymer
        dispersions)
    25086-62-8 HCAPLUS
RN
CN
     2-Propenoic acid, 2-methyl-, sodium salt (1:1), homopolymer (CA
    INDEX NAME)
    CM
         1
    CRN 5536-61-8
    CMF C4 H6 O2 . Na
    CH<sub>2</sub>
   Na
    25087-26-7 HCAPLUS
RN
    2-Propenoic acid, 2-methyl-, homopolymer (CA INDEX NAME)
CN
     CM
    CRN 79-41-4
    CMF C4 H6 O2
    CH2
 Me_U_CO2H
```

```
ST
     radical polymn water soluble anionic acrylic
     polymer dispersion
ΙT
     Alcohols, uses
     RL: NUU (Other use, unclassified); USES (Uses)
        (C12-14-branched, ethoxylated, Noigen ET 135; production of
        water-soluble anionic polymer
        dispersions)
ΤТ
     Polyoxyalkylenes, uses
     RL: NUU (Other use, unclassified); USES (Uses)
        (alkyl group-terminated; production of water-sol
        . anionic polymer dispersions)
ΙT
     Polyoxyalkylenes, uses
     RL: NUU (Other use, unclassified); USES (Uses)
        (alkylphenyl group-terminated; production of water-
        soluble anionic polymer dispersions)
     Polyelectrolytes
ΙT
     Surfactants
        (anionic; production of water-soluble anionic
        polymer dispersions)
ΙT
     Polymerization
        (emulsion, radical; production of water-
        soluble anionic polymer dispersions)
ΙT
    Lanolin
     RL: NUU (Other use, unclassified); USES (Uses)
        (ethoxylated; production of water-soluble anionic
        polymer dispersions)
ΙT
     Surfactants
        (nonionic; production of water-soluble anionic
        polymer dispersions)
     Carboxylic acids, uses
IT
     RL: NUU (Other use, unclassified); USES (Uses)
        (polycarboxylic, salts; production of water-sol
        . anionic polymer dispersions)
ΙT
     Carboxylic acids, uses
     RL: NUU (Other use, unclassified); USES (Uses)
        (polycarboxylic; production of water-soluble
        anionic polymer dispersions)
ΙT
     Disperse systems
       Dispersing agents
        (production of water-soluble anionic polymer
        dispersions)
IΤ
     Polyoxyalkylenes, uses
     RL: NUU (Other use, unclassified); USES (Uses)
        (production of water-soluble anionic polymer
        dispersions)
ΙT
     Polymerization catalysts
        (radical; production of water-soluble anionic
        polymer dispersions)
IΤ
     Polymers, preparation
     RL: IMF (Industrial manufacture); PREP (Preparation)
        (water-soluble; production of water-
        soluble anionic polymer dispersions)
ΙT
     9004-32-4, Cellogen NB-P
     RL: NUU (Other use, unclassified); USES (Uses)
        (Cellogen 5A; production of water-soluble anionic
        polymer dispersions)
IΤ
     2997-92-4, 2,2'-Azobis(2-amidinopropane) dihydrochloride
     RL: CAT (Catalyst use); USES (Uses)
        (V 50; production of water-soluble anionic polymer
        dispersions)
     102-71-6, Triethanolamine, uses
                                      110-18-9,
     N, N, N', N'-Tetramethylethylenediamine
                                            7631-90-5, Sodium bisulfite
                                         7727-21-1, Potassium
     7722-84-1, Hydrogen peroxide, uses
                                                  7757-83-7, Sodium
     persulfate 7727-54-0, Ammonium persulfate
     sulfite 7772-98-7, Sodium thiosulfate
                                              7775-27-1, Sodium
     persulfate 15545-97-8, 2,2'-Azobis(4-methoxy-2,4-
```

942054-56-0

dimethyl)valeronitrile 27776-21-2, VA 044

RL: CAT (Catalyst use); USES (Uses) (production of water-soluble anionic polymer dispersions) 9003-06-9P, Acrylamide-acrylic acid copolymer 25085-02-3P, Acrylamide-sodium acrylate copolymer 38808-69-49, Acrylamide-acrylic acid-itaconic acid copolymer 40623-73-2P 62649-23-4P, Acrylamide-acrylic acid-sodium acrylate copolymer 78474-98-3P, Acrylamide-2-acrylamide-2-methylpropanesulfonic acid-acrylic acid copolymer 84233-77-2P 115426-14-79 514225-71-9P 942054-57-19, Acrylamide-2-acrylamide-2-methylpropanesulfonic acid-itaconic acid-sodium acrylate copolymer 942054-58-29,  ${\tt Acrylamide-2-acrylamide-2-methyl propane sulfonic\ acid-acrylic}$ acid-itaconic acid-sodium acrylate copolymer 942054-59-39 942054-60-69 942054-61-79 RL: IMF (Industrial manufacture); PREP (Preparation) (production of water-soluble anionic polymer dispersions) 7647-14-5, Sodium chloride, uses 7757-82-6, Sodium sulfate, uses 7783-20-2, Ammonium sulfate, uses 9003-01-4, Poly(acrylic acid) IT 9003-04-7, Poiz 530 9003-11-6D, Ethylene oxide-propylene oxide copolymer, ethers 9005-38-3, Sodium alginate 9016-45-9 9086-60-6, Ammonium carboxymethyl cellulose 12125-02-9, Ammonium chloride, uses 12778-04-0, Noigen EA 141 250%6-62-8, Sodium methacrylate homopolymer 25087-26-7, Poly(methacrylic acid) 25322-68-3D, Poly(ethylene glycol), alkylphenyl or alkyl ethers 25549-84-2, Sodium acrylate homopolymer 27119-07-9, Poly(2-acrylamide-2methylpropanesulfonic acid) 35545-57-4, Solsperse 27000 60472-42-6, Poiz 520 60472-42-6, Poiz 521 83847-31-8, Poiz 532A 109265-72-7, Solsperse 20000 286956-86-3, Solsperse 24000 656236-92-9, Solsperse 43000 880082-76-8, Solsperse 44000 942205-64-3, Noigen ET 89 942205-66-5, Ramigen ET 20 942206-40-8, Noigen EA 135 942206-50-0, CA 100 (surfactant) RL: NUU (Other use, unclassified); USES (Uses) (production of water-soluble anionic polymer dispersions) REFERENCE COUNT: THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT L83 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2006:121602 HCAPLUS Full-text DOCUMENT NUMBER: 144:194033 TITLE: Manufacture of deinked pulp and additives therefor INVENTOR(S): Fujiwara, Takahiro; Nakada, Tomohiko; Hashiguchi, Yoshiharu PATENT ASSIGNEE(S): Harima Chemicals, Inc., Japan SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp. CODEN: JKXXAF DOCUMENT TYPE: Patent LANGUAGE: Japanese FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION: PATENT NO. KIND DATE APPLICATION NO. DATE JP 2006037290 A 20060209 JP 2004-221108 2004 0729 <--PRIORITY APPLN. INFO.: JP 2004-221108 2004

0729

<--

ED Entered STN: 09 Feb 2006 Deinked pulp is manufactured by addition of 820-soluble amphoteric copolymers with Mw AB 500,000-10,000,000 prepared by polymerization of (meth)acrylamide, cationic monomers, and anionic monomers to a pulp slurry after a flotation process and before dehydration of deinked pulp sluxry, so that yield of ash content containing fillers derived from wastepaper can be improved. The cationic monomer of the additives is bis(quaternary ammonium salt)-containing (meth)acrylamide prepared by reaction of dimethylaminopropylacrylamide with 1-chloro-2-hydroxypropyltrimethylammonium chloride. Thus, an aqueous 50% acrylamide solution 114, an aqueous 80% acrylic acid solution 4.33, dimethylaminoethyl methacrylate 7.55, and methylenebisacrylamide 0.02 g were polymerized at 90° and pH 3.0 in Me2CHOH/H2O mixture in the presence of ammonium persulfate and further polymerized with addnl. 50% acrylamide solution 35.8, 80% acrylic acid solution 2.16, and dimethylaminoethyl methacrylate 3.77 g to give a 20.5% solid amphoteric polymer (Mw 2,800,000) solution A 1% aqueous wastepaper pulp was deinked with deinking agent (Haritop P 100K) by a flotation method, mixed with 0.1% (to pulp) of the amphoteric polymer solution, dehydrated, and dried at 105° for 6 h to give pulp with ash yield 22.1%. ΤТ 108968-11-29, Acrylamide-dimethylaminopropylacrylamideitaconic acid copolymer 154261-80-09, Acrylamide-dimethylacrylamide-dimethylaminoethyl methacrylate-itaconic acid copolymer 874838-84-39, Acrylamide-acryloyloxyethyldimethylbenzylammonium chloride-itaconic acid-methacrylonitrile copolymer 874888-86-59, Acrylamide-dimethylaminopropylacrylamideitaconic acid-sodium methallylsulfonate copolymer 874888-88-78, Acrylamide-2-hydroxy-N,N,N,N',N'-pentamethyl-N'-[3-[(1-oxo-2-propenyl)amino]propyl]-1,3-propanediammoniumdichloride-itaconic acid-methacrylonitrile-sodium methallylsulfonate copolymer 874888-90-19, Acrylamide-diallyldimethylammonium chloride-dimethylacrylamide-itaconic acid-sodium methallylsulfonate copolymer RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); PREP (Preparation); USES (Uses) (amphoteric polymers as additives in pulp deinking for improved ash yield) RN 108968-11-2 HCAPLUS Butanedioic acid, methylene-, polymer with N-[3-(dimethylamino)propyl]-2-propenamide and 2-propenamide (CA INDEX NAME) CM 1 CRN 3845-76-9 CMF C8 H16 N2 O Me2N\_ (CH2)3\_NH\_ U\_CH\_\_CH2 CM2 CRN 97-65-4 CMF C5 H6 O4

СH2 HO2C\_\_\_\_\_СH2\_\_СО2Н

СH2 HO2C\_\_\_\_\_CH2\_\_ СО2H

CRN 97-65-4 CMF C5 H6 O4

- RN 874888-84-3 HCAPLUS
- CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with methylenebutanedioic acid, 2-methyl-2-propenenitrile and 2-propenamide (9CI) (CA INDEX NAME)
  - CM 1
  - CRN 46830-22-2
  - CMF C14 H20 N O2 . C1

● c1-

- CM 2
- CRN 126-98-7 CMF C4 H5 N
- CH2 H3C\_\_U\_C\_\_N
  - CM 3
  - CRN 97-65-4 CMF C5 H6 O4
- СH2 HO2C\_\_\_\_\_СH2\_\_СО2H
  - CM 4
  - CRN 79-06-1
  - CMF C3 H5 N O
- H<sub>2</sub>N\_ U\_ CH\_ CH<sub>2</sub>

- 874888-86-5 HCAPLUS Butanedioic acid, methylene-, polymer with N-[3-(dimethylamino)propyl]-2-propenamide, 2-propenamide andsodium 2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME) CM 1 CRN 3845-76-9 CMF C8 H16 N2 O Me2N\_ (CH2)3\_NH\_ U\_CH\_\_CH2 CM2 CRN 1561-92-8 CMF C4 H8 O3 S . Na Me\_\_\_\_CH2\_\_SO3H Na Na 3 CMCRN 97-65-4 CMF C5 H6 O4 CH2 но2с\_\_\_\_Сн2\_\_со2н CM4 CRN 79-06-1 CMF C3 H5 N O
- RN 874888-88-7 HCAPLUS

н2N\_Й\_сн\_сн2

CN 1,3-Propanediaminium, 2-hydroxy-N,N,N,N',N'-pentamethyl-N'-[3-[(1-oxo-2-propenyl)amino]propyl]-, dichloride, polymer with methylenebutanedioic acid, 2-methyl-2-propenenitrile,

2-propenamide and sodium 2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 110226-36-3

CMF C14 H31 N3 O2 . 2 C1

Me3+N\_CH2\_CH2\_CH2\_CH2\_N
$$_{\rm Me}^{+}$$
 (CH2)3\_NH\_CCH2\_CH2

**●**2 Cl-

CM 2

CRN 1561-92-8

CMF C4 H8 O3 S . Na

$$\mathbf{Me} = \mathbf{U}_{\text{CH2}-\text{SO3H}}^{\text{CH2}}$$

Na Na

CM 3

CRN 126-98-7 CMF C4 H5 N

CM 4

CRN 97-65-4 CMF C5 H6 O4

CM 5

CRN 79-06-1

CMF C3 H5 N O

- RN 874888-90-1 HCAPLUS
- CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with N,N-dimethyl-2-propenamide, methylenebutanedioic acid, 2-propenamide and sodium 2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 7398-69-8 CMF C8 H16 N . Cl

Ocl-

CM 2

CRN 2680-03-7 CMF C5 H9 N O

CM 3

CRN 1561-92-8 CMF C4 H8 O3 S . Na

Na

CM 4

CRN 97-65-4 CMF C5 H6 O4

```
CH2
 ноэс_€_снэ_соэн
     CM 5
     CRN 79-06-1
     CMF C3 H5 N O
 H2N_ U_ CH__ CH2
CC
     43-6 (Cellulose, Lignin, Paper, and Other Wood Products)
    59765-66-1P, Acrylamide-acrylic acid-dimethylaminoethyl
    methacrylate-methylenebisacrylamide copolymer
     108968-11-29, Acrylamide-dimethylaminopropylacrylamide-
     itaconic acid copolymer 154261-80-09,
    Acrylamide-dimethylacrylamide-dimethylaminoethyl
     methacrylate-itaconic acid copolymer 874888-82-1P,
     Acrylamide-dimethylacrylamide-dimethylaminoethyl
    methacrylate-fumaric acid-
    methacryloyloxyethyldimethylbenzylammonium chloride-sodium
    methallylsulfonate copolymer 874888-84-39,
     Acrylamide-acryloyloxyethyldimethylbenzylammonium
     chloride-itaconic acid-methacrylonitrile copolymer
     874888-86-59, Acrylamide-dimethylaminopropylacrylamide-
     itaconic acid-sodium methallylsulfonate copolymer
     874888-88-79, Acrylamide-2-hydroxy-N, N, N', N'-pentamethyl-
     N'-[3-[(1-oxo-2-propenyl)amino]propyl]-1,3-propanediammonium
     dichloride-itaconic acid-methacrylonitrile-sodium
    methallylsulfonate copolymer 874888-90-19,
     Acrylamide-diallyldimethylammonium
     chloride-dimethylacrylamide-itaconic acid-sodium
     methallylsulfonate copolymer
     RL: IMF (Industrial manufacture); MOA (Modifier or additive use);
     PRP (Properties); PREP (Preparation); USES (Uses)
        (amphoteric polymers as additives in pulp deinking for improved
        ash yield)
L83 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:781869 HCAPLUS Full-text
DOCUMENT NUMBER:
                        141:268606
                        Ink jet recording method by using pigment ink
TITLE:
                        and additional processing solution
INVENTOR(S):
                        Nakatsu, Hiromi; Kamoto, Takanori; Suzuki,
                        Kiyota; Tsubaki, Yorihisa; Aoki, Momomi
PATENT ASSIGNEE(S): Sharp Corp., Japan
                       Jpn. Kokai Tokkyo Koho, 19 pp.
SOURCE:
                       CODEN: JKXXAF
DOCUMENT TYPE:
                      Patent
LANGUAGE:
                        Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
     KIND DATE
                                         APPLICATION NO.
    PATENT NO.
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JP 2004262081 Α 20040924 JP 2003-54503 2003 0228

JP 2003-54503 PRIORITY APPLN. INFO.:

2003 0228

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ED Entered STN: 24 Sep 2004

Images are formed by (1) jetting ink comprising at least a self- dispersing pigment surface-treated with carboxylic acid or sulfonic acid group, water, an alkali soluble resin ≥5 weight%, and an alkaline agent on a recording material and (2) coating the material with a solution containing a water soluble resin with an acidic group and water or applying the solution on it, before, simultaneously, or after recording, resp. The method prevents bleeding, color mixture, and ink penetration to a backside, showing high image d. and improved resistance to abrasion, water, and light. ΤТ

102-71-6, Triethanolamine, uses

RL: TEM (Technical or engineered material use); USES (Uses) (ink jet recording method by using pigment ink and addnl. processing solution)

102-71-6 HCAPLUS RN

Ethanol, 2,2',2''-nitrilotris- (CA INDEX NAME)

25948-33-8, Acrylic acid-itaconic acid copolymer RL: TEM (Technical or engineered material use); USES (Uses) (processing solution containing; ink jet recording method by using

pigment ink and addnl. processing solution)

25948-33-8 HCAPLUS RN

Butanedioic acid, 2-methylene-, polymer with 2-propenoic acid (CA CN INDEX NAME)

CM 1

CRN 97-65-4 CMF C5 H6 O4

CM 2

CRN 79-10-7 CMF C3 H4 O2

ICM B41M005-00

ICS B41J002-01; C09D011-00

74-6 (Radiation Chemistry, Photochemistry, and Photographic and

Other Reprographic Processes) 56-81-5, Glycerin, uses 100-42-5D, Styrene, acrylic polymers ΙT 102-71-6, Triethanolamine, uses 111-46-6, Diethylene qlycol, uses 112-34-5, Diethylene qlycol monobutyl ether 143-22-6, Triethylene glycol monobutyl ether 1559-34-8, Tetraethylene glycol monobutyl ether 5343-92-0, 1,2-Pentanediol 6920-22-5, 1,2-Hexanediol 7732-18-5, Water, uses 222961-29-7, Cab O jet 200 RL: TEM (Technical or engineered material use); USES (Uses) (ink jet recording method by using pigment ink and addnl. processing solution) 67-63-0, Isopropyl alcohol, uses 25948-33-8, Acrylic ΙT acid-itaconic acid copolymer RL: TEM (Technical or engineered material use); USES (Uses) (processing solution containing; ink jet recording method by using pigment ink and addnl. processing solution) L83 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2004:700706 HCAPLUS <u>Full-text</u> DOCUMENT NUMBER: 141:208656 TITLE: Water-soluble polymer coatings showing good gas barrier property in high humidity condition and plastics coated with them Kamoshita, Miyuki INVENTOR(S): PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp. CODEN: JKXXAF DOCUMENT TYPE: Patent Japanese LANGUAGE: FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION: PATENT NO. KIND DATE APPLICATION NO. DATE ----\_\_\_\_\_ \_\_\_\_\_ JP 2004238605 A 20040826 JP 2003-105899 2003 0409 PRIORITY APPLN. INFO.: JP 2002-356849 2002 1209 <--ΕD Entered STN: 27 Aug 2004 AΒ The coatings contain (A) (A1) CO2H- and epoxy-free polymers manufactured from ethylenically unsatd. monomers bearing OH and/or (A2) CO2H-free copolymers manufactured from ethylenically unsatd. monomers bearing OH and ethylenically unsatd. monomers bearing epoxy groups, and (B) OH-free polymers manufactured from ethylenically unsatd. monomers bearing CO2H or acid anhydride groups at CO2H/OH molar ratio 0.05-100. The coated plastics are useful for packaging materials. Thus, a stretched PET film was coated with a primer containing Vylon 200 (polyester) and Sumidur 3300 (polyisocyanate), dried, coated with an aqueous solution containing Blemmer GLM (glycerin methacrylate) and poly(acrylic acid) Na salt at CO2H/OH molar ratio 4.42, dried, and heated, showing O permeability 1.12 cm3/m2-24 h-atm at 25° and relative humidity 80%. 26099-89-8P 741708-91-8P RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (water-soluble polymer coatings showing good gas barrier property in high humidity condition for plastic

Butanedioic acid, 2-methylene-, homopolymer, sodium salt (CA

26099-89-8 HCAPLUS

INDEX NAME)

RN

CN

```
CRN 25119-64-6
     CMF
         (C5 H6 O4)x
     CCI PMS
         CM
               2
         CRN 97-65-4
          CMF C5 H6 O4
      CH2
 но2С____Сн2__СО2Н
RN
    741708-91-8 HCAPLUS
    Butanedioic acid, methylene-, polymer with 2-propenoic acid,
     ammonium sodium salt (9CI) (CA INDEX NAME)
     CM
         1
     CRN 25948-33-8
     CMF
         (C5 H6 O4 . C3 H4 O2)x
     CCI PMS
               2
         СМ
         CRN 97-65-4
         CMF C5 H6 O4
 но2С_____Сн2__Со2Н
         CM
               3
         CRN 79-10-7
         CMF C3 H4 O2
 но_ Е_сн__сн2
    741280-58-0P
                  741280-59-1P
ΤТ
     741708-90-79
                   741708-93-0P
     741708-94-19
                    741709-02-49
     741709-06-8P
                    741709-08-02
     RL: IMF (Industrial manufacture); TEM (Technical or engineered
     material use); PREP (Preparation); USES (Uses)
        (water-soluble polymer coatings showing good
        gas barrier property in high humidity condition for plastic
        substrates)
RN
     741280-58-0 HCAPLUS
     2-Propenoic acid, 2-methyl-, monoester with 1,2,3-propanetriol,
CN
     polymer with 4-hydroxybutyl 2-propenoate and 2-propenoic acid,
     sodium salt (9CI) (CA INDEX NAME)
```

CM 1

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CM 1
    CRN 741280-57-9
CMF (C7 H12 O4 . C7 H12 O3 . C3 H4 O2)x
CCI PMS
          CM 2
          CRN 2478-10-6
          CMF C7 H12 O3
HO_ (CH2)4_O_U_CH__CH2
          CM 3
          CRN 79-10-7
          CMF C3 H4 O2
но_ <mark>©_</mark> сн__ сн<sub>2</sub>
          CM 4
         CRN 50853-28-6
CMF C7 H12 O4
CCI IDS
               CM 5
                CRN 79-41-4
                CMF C4 H6 O2
Me_UCH2
                CM 6
                CRN 56-81-5
                CMF C3 H8 O3
```

но\_сн2\_сн\_сн2\_он

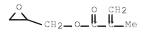
CN 2-Propenoic acid, 2-methyl-, monoester with 1,2,3-propanetriol, polymer with oxiranylmethyl 2-methyl-2-propenoate and 2-propenoic acid, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 
$$160896-37-7$$
 CMF (C7 H12 O4 . C7 H10 O3 . C3 H4 O2)x CCI PMS

CM 2

CRN 106-91-2 CMF C7 H10 O3



CM 3

CRN 79-10-7 CMF C3 H4 O2

CM 4

CM 5

CRN 79-41-4 CMF C4 H6 O2

$$_{\text{Me}} = \overset{\text{CH2}}{\underset{\text{CO}_2\text{H}}{\text{H}}}$$

CM 6

CRN 56-81-5 CMF C3 H8 O3

```
741708-90-7 HCAPLUS
     2-Propenoic acid, 2-methyl-, monoester with 1,2,3-propanetriol,
CN
     polymer with ethene and 2,5-furandione, sodium salt (9CI) (CA
     INDEX NAME)
     CM 1
     CRN 741708-89-4
     CMF (C7 H12 O4 . C4 H2 O3 . C2 H4)\times
     CCI PMS
          CM
               2
          CRN 108-31-6
          CMF C4 H2 O3
          CM
               3
          CRN 74-85-1
          CMF C2 H4
 H2C___CH2
          CM
          CRN 50853-28-6
          CMF C7 H12 O4
          CCI IDS
               CM
                    5
               CRN 79-41-4
CMF C4 H6 O2
    CH2
 Me_U_CO2H
               CM
                    6
```

CRN 56-81-5 CMF C3 H8 O3

```
741708-93-0 HCAPLUS
RN
CN
     Butanedioic acid, methylene-, polymer with 1,2,3-propanetriol
     mono(2-methyl-2-propenoate) and 2-propenoic acid, ammonium sodium
     salt (9CI) (CA INDEX NAME)
         1
     CM
     CRN 741708-92-9
     CMF (C7 H12 O4 . C5 H6 O4 . C3 H4 O2)x
     CCI PMS
          CM
                2
          CRN 97-65-4
          CMF C5 H6 O4
 СH2
HO2C_U_CH2_CO2H
          CM
               3
          CRN 79-10-7
          CMF C3 H4 O2
 но_ <mark>(</mark>_ сн__ сн<sub>2</sub>
          CM
               4
          CRN 50853-28-6
          CMF C7 H12 O4
```

CCI IDS

CM

CM 6
CRN 56-81-5

5

CRN 79-41-4 CMF C4 H6 O2

CMF C3 H8 O3

RN 741708-94-1 HCAPLUS

CN Butanedioic acid, methylene-, polymer with 1,2,3-propanetriol mono(2-methyl-2-propenoate) and 2-propenoic acid, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 741708-92-9

CMF (C7 H12 O4 . C5 H6 O4 . C3 H4 O2) $\times$ 

CCI PMS

CM 2

CRN 97-65-4 CMF C5 H6 O4

CM 3

CRN 79-10-7 CMF C3 H4 O2

CM 4

CRN 50853-28-6

CMF C7 H12 O4

CCI IDS

CM 5

CRN 79-41-4 CMF C4 H6 O2

CM 6

CRN 56-81-5 CMF C3 H8 O3

RN 741709-02-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, monoester with 1,2,3-propanetriol, polymer with ethene, 2,5-furandione and 2-hydroxyethyl 2-propenoate, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 741709-01-3

CMF (C7 H12 O4 . C5 H8 O3 . C4 H2 O3 . C2 H4)  $\times$ 

CCI PMS

CM 2

CRN 818-61-1 CMF C5 H8 O3

CM 3

CRN 108-31-6 CMF C4 H2 O3



CM 4

CRN 74-85-1 CMF C2 H4

H2C\_\_\_CH2

CM 5

CRN 50853-28-6 CMF C7 H12 O4

CM 7

CRN 56-81-5 CMF C3 H8 O3

RN 741709-06-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, monoester with 1,2,3-propanetriol, polymer with ethene, 2,5-furandione and 4-hydroxybutyl 2-propenoate, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 741709-05-7 CMF (C7 H12 O4 . C7 H12 O3 . C4 H2 O3 . C2 H4)x CCI PMS

CM 2

CRN 2478-10-6 CMF C7 H12 O3

CM 3

CRN 108-31-6 CMF C4 H2 O3

CRN 74-85-1 CMF C2 H4 H2C\_\_\_CH2 5 CMCRN 50853-28-6 CMF C7 H12 O4 CCI IDS 6 CMCRN 79-41-4 CMF C4 H6 O2  $_{\text{Me}} = \overset{\text{CH2}}{\underset{-\text{CO}_2\text{H}}{\text{H}}}$ 7 CM CRN 56-81-5 CMF C3 H8 O3 ОН но\_сн2\_сн\_сн2\_он 741709-08-0 HCAPLUS RN 2-Propenoic acid, 2-methyl-, monoester with 1,2,3-propanetriol, CN polymer with ethene, 2,5-furandione and oxiranylmethyl 2-methyl-2-propenoate, sodium salt (9CI) (CA INDEX NAME) CM 1 CRN 741709-07-9 CMF (C7 H12 O4 . C7 H10 O3 . C4 H2 O3 . C2 H4) xCCI PMS CM2

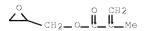


CRN 108-31-6 CMF C4 H2 O3

CM 3

CRN 106-91-2

CMF C7 H10 O3



CM 4

CRN 74-85-1 CMF C2 H4

 $H2C \longrightarrow CH2$ 

CM 5

CRN 50853-28-6 CMF C7 H12 O4 CCI IDS

CM 6

CRN 79-41-4 CMF C4 H6 O2

CM 7

CRN 56-81-5 CMF C3 H8 O3

- IC ICM C09D133-14
  - ICS B05D007-02; B05D007-24; B32B027-30; C09D133-02; C09D157-10
- CC 42-7 (Coatings, Inks, and Related Products)
- Section cross-reference(s): 38
  ST water soluble polymer coating gas barrier; gas
- barrier coating packaging PET film; glycerin methacrylate acrylic acid copolymer gas barrier coating
- IT Packaging materials

```
(films, gas-impermeable; water-soluble polymer
        coatings showing good gas barrier property in high humidity
        condition for plastic substrates)
ΙT
     Coating materials
        (gas-impermeable; water-soluble polymer
       coatings showing good gas barrier property in high humidity
       condition for plastic substrates)
ΤТ
     Polyurethanes, uses
     RL: IMF (Industrial manufacture); TEM (Technical or engineered
     material use); PREP (Preparation); USES (Uses)
        (polyester-, primers; water-soluble polymer
        coatings showing good gas barrier property in high humidity
        condition for plastic substrates)
ΤТ
     Polyesters, uses
     RL: TEM (Technical or engineered material use); USES (Uses)
        (water-soluble polymer coatings showing good
        gas barrier property in high humidity condition for plastic
        substrates)
ΙT
     516514-65-1P
     RL: IMF (Industrial manufacture); TEM (Technical or engineered
     material use); PREP (Preparation); USES (Uses)
        (primer; water-soluble polymer coatings
        showing good gas barrier property in high humidity condition
        for plastic substrates)
     25038-59-9, Poly(ethylene terephthalate), uses
     RL: TEM (Technical or engineered material use); USES (Uses)
        (substrate films; water-soluble polymer
       coatings showing good gas barrier property in high humidity
       condition for plastic substrates)
ΙT
     9003-04-7P, Acrylic acid homopolymer sodium salt
                                                      9019-67-4P
     26022-14-0P 25099-89-89
                                28258-28-8P 29086-87-1P,
     4-Hydroxybutyl acrylate homopolymer
                                         130315-91-2P 138305-48-3P
     741708-91-89
                    741709-04-6P
     RL: IMF (Industrial manufacture); POF (Polymer in formulation);
     RCT (Reactant); TEM (Technical or engineered material use); PREP
     (Preparation); RACT (Reactant or reagent); USES (Uses)
        (water-soluble polymer coatings showing good
       gas barrier property in high humidity condition for plastic
       substrates)
ΙT
     741280-53-5P 741280-58-0P
                                   741280-59-19
     741708-90-79 741708-93-09
                  741708-98-5P
     741708-94-1P
                                   741709-00-2P
     741709-02-49
                   741709-06-89
     741709-08-09
     RL: IMF (Industrial manufacture); TEM (Technical or engineered
    material use); PREP (Preparation); USES (Uses)
        (water-soluble polymer coatings showing good
        gas barrier property in high humidity condition for plastic
        substrates)
L83 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:
                       2004:390974 HCAPLUS Full-text
DOCUMENT NUMBER:
                        140:408516
TITLE:
                         Use of a copolymer having at least one an
                         alkoxy- or hydroxypolyoxyalkylene grafted
                         function for improving optical brightener
                         activity, and products obtained therefrom
INVENTOR(S):
                         Dupont, Francois; Jacquemet, Christian; Suau,
                         Jean Marc; Mongoin, Jacques
PATENT ASSIGNEE(S):
                         Coatex, Fr.
SOURCE:
                         Fr. Demande, 111 pp.
                         CODEN: FRXXBL
DOCUMENT TYPE:
                        Patent
LANGUAGE:
                         French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
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PATENT NO.					KIND		DATE		APPLICATION NO.							DATE
	 FR 2846978				A1		20040514		FR 2002-14000							2002 1108
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	2846978 2505099				B1 A1		20070518 20040527		CA 2003-2505099							2003 1105
											<-					
WO	WO 2004044022				A1			20040527		WO 2003-FR3300						2003 1105
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		•	UA,	UG,	US,	UZ,	VC,	VN,	YU,	ZA	٠,	ZM,	ZW		·	
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BR	BR 200301530			A			20050816		BR 2003-15301							2003 1105
EΡ	1565504				A1		20050824		< EP 2003-767912							
											<-					2003 1105
	R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR	-		LI,	LU,	NL,	SE,
		•	•	IE,	SI,	LT,	LV,	FI,	RO,	MK	ζ,	CY,	AL,	TR,	BG,	CZ,
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ИО	2005	0027	59		А		2005	0805		ИО	<- 20		2759			
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																0607

US 20060106186 A1 20060518 US 2005-533794

2005
1004

PRIORITY APPLN. INFO.:

FR 2002-14000 A

2002
1108

<-WO 2003-FR3300 W

2003
1105

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ED Entered STN: 14 May 2004

AB Water-soluble polymers based on ethylenically unsatd. monomers and unsatd. derivs. of alkoxy- or hydroxypolyoxyalkylenes such as 13.5:3.5:83 (%) acrylic acid-methacrylic acid-polyethylene glycol mono-Me ether methacrylate graft copolymer Na salt are useful for activating optical brighteners in paper coatings, textiles, detergents, and paints.

for activating optical brighteners in paper coatings, textiles 221882-30-0, Ethylene oxide-methacrylic acid graft copolymer methyl ether sodium salt 256511-28-1, Acrylic acid-ethylene oxide-methacrylic acid graft copolymer methyl ether sodium salt 382162-06-3 382162-09-6 382162-32-5 382162-40-5 382162-56-3, Acrylic acid-ethylene oxide-methacrylic acid graft copolymer methyl ether triethanolamine salt 382162-62-1 382162-65-4 690210-47-0 690210-48-1 690210-50-5 690210-54-9

690210-57-2 690210-61-8 690210-70-9
RL: MOA (Modifier or additive use); TEM (Technical or engineered

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(comprised actual and assumed monomers; use of alkoxy- or hydroxypolyoxyalkylene-grafted acrylic polymers for improving optical brightener activity in paper coatings, textiles, detergents, and paints)

RN 221882-30-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with oxirane, methyl ether, graft, sodium salt (CA INDEX NAME)

CM 1

CRN 67-56-1 CMF C H4 O

Н3С\_ОН

CM 2

CRN 167763-01-1

CMF (C4 H6 O2 . C2 H4 O) $\times$ 

CCI PMS

CM 3

CRN 79-41-4 CMF C4 H6 O2

 $_{\text{Me}} = \overset{\text{CH2}}{\underset{\text{CO}_2\text{H}}{\text{H}}}$ 

```
CM
              4
          CRN 75-21-8
          CMF C2 H4 O
\stackrel{\circ}{\bigtriangleup}
RN
   256511-28-1 HCAPLUS
     2-Propenoic acid, 2-methyl-, polymer with oxirane and 2-propenoic
     acid, methyl ether, graft, sodium salt (CA INDEX NAME)
     CM
     CRN 67-56-1
     CMF C H4 O
 нзс_он
     CM 2
     CRN 159106-91-9
     CMF (C4 H6 O2 . C3 H4 O2 . C2 H4 O) \times
     CCI PMS
              3
          CM
          CRN 79-41-4
          CMF C4 H6 O2
 CH2
Me_U_CO2H
          CM 4
          CRN 79-10-7
CMF C3 H4 O2
 но_ Й_сн_сн2
              5
          CM
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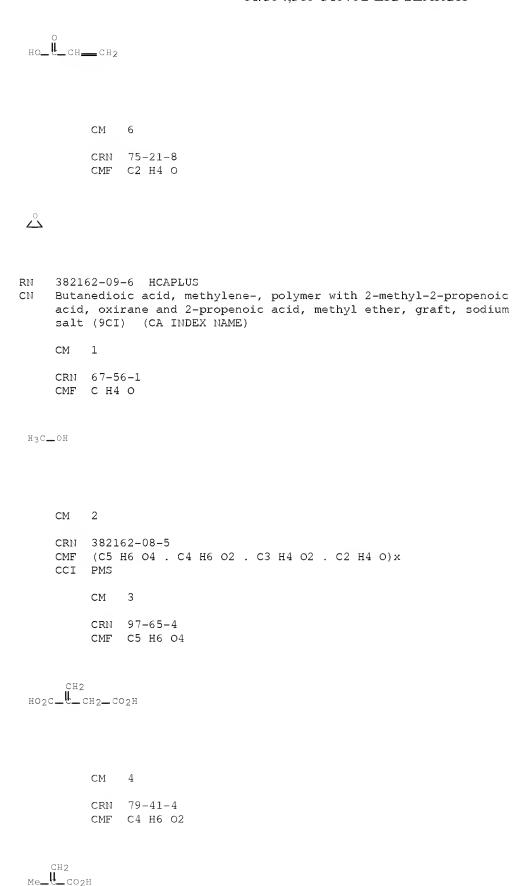
CRN 75-21-8 CMF C2 H4 O

 $\stackrel{\circ}{\bigtriangleup}$ 

CM

CRN 79-10-7 CMF C3 H4 O2

```
RN
    382162-06-3 HCAPLUS
     2-Propenoic acid, 2-methyl-, polymer with
     2-methyl-2-[\,(1-oxo-2-propenyl)\,amino]-1-propane sulfonic\ acid,
    oxirane and 2-propenoic acid, methyl ether, graft, sodium salt
     (9CI) (CA INDEX NAME)
    CM 1
    CRN 67-56-1
    CMF C H4 O
нзс_он
    CM 2
    CRN 256511-25-8
    CMF (C7 H13 N O4 S . C4 H6 O2 . C3 H4 O2 . C2 H4 O)x CCI PMS
         CM
               3
         CRN 15214-89-8
          CMF C7 H13 N O4 S
          CM
               4
         CRN 79-41-4
         CMF C4 H6 O2
CH2
Me_U_CO2H
```



```
5
           CM
           CRN 79-10-7
           CMF C3 H4 O2
 но_ <mark>(</mark>_ сн__ сн<sub>2</sub>
           CM
                 6
           CRN 75-21-8
           CMF C2 H4 O
 \overset{\circ}{\hookrightarrow}
     382162-32-5 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, polymer with oxirane and 2-propenoic
CN
     acid, methyl ether, graft, potassium salt (CA INDEX NAME)
     CM
     CRN 67-56-1
     CMF C H4 O
 нзс_он
     CM 2
     CRN 159106-91-9
     CMF (C4 H6 O2 . C3 H4 O2 . C2 H4 O) x
     CCI PMS
           CM
                 3
           CRN 79-41-4
CMF C4 H6 O2
    CH2
 Me_U_CO2H
                 4
           CM
```

CRN 79-10-7 CMF C3 H4 O2

```
но_ Ё_сн__сн2
          CM
                5
          CRN 75-21-8
          CMF C2 H4 O
\stackrel{\circ}{\bigtriangleup}
     382162-40-5 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, polymer with oxirane and 2-propenoic
CN
     acid, methyl ether, graft, ammonium salt (9CI) (CA INDEX NAME)
     CM
     CRN 67-56-1
     CMF C H4 O
 нзс_он
     CM 2
     CRN 159106-91-9
     CMF (C4 H6 O2 . C3 H4 O2 . C2 H4 O) x
     CCI PMS
          CM
               3
          CRN 79-41-4
          CMF C4 H6 O2
 СH2
Me_U_СO2H
          CM
              4
          CRN 79-10-7
          CMF C3 H4 O2
 но_ Й_ сн__ сн2
```

```
CRN 75-21-8
          CMF C2 H4 O
\overset{\circ}{\bigtriangleup}
RN
    382162-56-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with oxirane and 2-propenoic
     acid, methyl ether, graft, compd. with
     2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)
     CM 1
     CRN 102-71-6
     CMF C6 H15 N O3
             CH2-CH2-OH
 HO_CH2_CH2_N_CH2_CH2_OH
     CM 2
     CRN 381164-42-7
     CMF (C4 H6 O2 . C3 H4 O2 . C2 H4 O) x . x C H4 O
          CM
               3
          CRN 67-56-1
          CMF C H4 O
 нзс_он
          CM 4
          CRN 159106-91-9
               (C4 H6 O2 . C3 H4 O2 . C2 H4 O)x
          CCI PMS
               CM
                    5
               CRN 79-41-4
               CMF C4 H6 O2
 СH2
ме_Ц_СО2Н
```

5

```
CM 6
                CRN 79-10-7
                CMF C3 H4 O2
 но_Й_сн_сн2
                    7
                CM
                CRN 75-21-8
                CMF C2 H4 O
 \stackrel{\circ}{\hookrightarrow}
     382162-62-1 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, polymer with oxirane and 2-propenoic
CN
     acid, methyl ether, graft, calcium sodium salt (9CI) (CA INDEX
     NAME)
     CM
     CRN 67-56-1
     CMF C H4 O
 нзс-он
     CM 2
     CRN 159106-91-9
     CMF (C4 H6 O2 . C3 H4 O2 . C2 H4 O) x
     CCI PMS
          СМ
                3
          CRN 79-41-4
CMF C4 H6 O2
    CH2
 ме_Ü_со<sub>2</sub>н
                4
          CM
          CRN 79-10-7
```

CMF C3 H4 O2

```
но_ Ё_сн__сн2
          CM
               5
          CRN 75-21-8
          CMF C2 H4 O
\stackrel{\circ}{\bigtriangleup}
     382162-65-4 HCAPLUS
RN
CN 2-Propenoic acid, 2-methyl-, polymer with oxirane and 2-propenoic
     acid, methyl ether, graft, magnesium sodium salt (9CI) (CA INDEX
     NAME)
     CM 1
     CRN 67-56-1
     CMF C H4 O
 нзс-он
     CM 2
     CRN 159106-91-9
     CMF (C4 H6 O2 . C3 H4 O2 . C2 H4 O) x
     CCI PMS
          CM
               3
          CRN 79-41-4
          CMF C4 H6 O2
 CH2
Me_U_CO2H
          CM
              4
          CRN 79-10-7
          CMF C3 H4 O2
 но_Ё_сн__сн₂
```

```
CRN 75-21-8
          CMF C2 H4 O
 \overset{\circ}{ }
RN
     690210-47-0 HCAPLUS
CN
     2\text{-Propenoic} acid, 2\text{-methyl-}, polymer with ethenyltriethoxysilane,
     oxirane and 2-propenoic acid, methyl ether, graft, sodium salt
     (9CI) (CA INDEX NAME)
     CM
         1
     CRN 67-56-1
     CMF C H4 O
 нзс_он
     CM 2
     CRN 690210-46-9
     CMF (C8 H18 O3 Si . C4 H6 O2 . C3 H4 O2 . C2 H4 O) x
     CCI PMS
          CM
               3
          CRN 79-41-4
          CMF C4 H6 O2
 CH2
Me_U_CO2H
          CM
              4
          CRN 79-10-7
          CMF C3 H4 O2
 но_ Ё_сн__сн2
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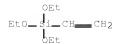
5

CM

CM

5

CRN 78-08-0 CMF C8 H18 O3 Si



CM 6

CRN 75-21-8 CMF C2 H4 O



RN 690210-48-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with oxirane, 2-propenoic acid and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate, methyl ether, graft, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 67-56-1 CMF C H4 O

Н3С\_ОН

CM 2

CRN 689267-94-5

CMF (C10 H20 O5 Si . C4 H6 O2 . C3 H4 O2 . C2 H4 O)  $\boldsymbol{x}$ 

CCI PMS

CM 3

CRN 2530-85-0 CMF C10 H20 O5 Si

H2C O OME Me\_U\_O\_(CH2)3\_Si\_OME

CM 4

CRN 79-41-4 CMF C4 H6 O2

```
СH2
Me_U_СО2Н
                5
          CM
          CRN 79-10-7
          CMF C3 H4 O2
 но_ Й_ сн__ сн2
          CM
                6
          CRN 75-21-8
          CMF C2 H4 O
\overset{\circ}{\hookrightarrow}
RN
     690210-50-5 HCAPLUS
     2-Propenoic acid, 2-methyl-, polymer with
     3, 3, 4, 4, 5, 5, 6, 6, 7, 7, 8, 8, 9, 9, 10, 10, 11, 11, 12, 12, 12-
     heneicosafluorododecyl 2-propenoate, oxirane and 2-propenoic acid,
     methyl ether, graft, sodium salt (9CI) (CA INDEX NAME)
     CM
          1
     CRN 67-56-1
     CMF C H4 O
 нзс_он
     CM 2
     CRN 690210-49-2
     CMF (C15 H7 F21 O2 . C4 H6 O2 . C3 H4 O2 . C2 H4 O) x
     CCI PMS
                3
          CM
          CRN 17741-60-5
          CMF C15 H7 F21 O2
 F3C_ (CF2)9_CH2_CH2_O_U_CH__CH__CH2
```

```
CM
                   4
             CRN 79-41-4
             CMF C4 H6 O2
 _{\text{Me}} = \bigcup_{-\text{CO}_2\text{H}}^{\text{CH2}}
             CM
             CRN 79-10-7
             CMF C3 H4 O2
 HO___CH___CH2
             CM
                    6
             CRN 75-21-8
             CMF C2 H4 O
 \overset{\circ}{\hookrightarrow}
      690210-54-9 HCAPLUS
RN
      2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), methyloxirane, oxirane and 2-propenoic
CN
      acid, butyl methyl ether, graft, sodium salt (9CI) (CA INDEX
      NAME)
      CM 1
      CRN 71-36-3
      CMF C4 H10 O
 H3C_CH2_CH2_CH2_OH
      CM 2
      CRN 67-56-1
      CMF C H4 O
```

Нзс\_ОН



CRN 75-21-8 CMF C2 H4 O

5

CRN 79-06-1 CMF C3 H5 N O

CM

 $\stackrel{\circ}{\smile}$ 

```
690210-57-2 HCAPLUS
RN
       2\text{-Propenoic} acid, 2\text{-methyl-}, polymer with oxirane, 2\text{-propenamide} and 2\text{-propenoic} acid, methyl ether, graft, sodium salt (CA INDEX
CN
       NAME)
       CM
            1
       CRN 67-56-1
       CMF C H4 O
 нзс_он
       CM 2
       CRN 245651-29-0
       CMF (C4 H6 O2 . C3 H5 N O . C3 H4 O2 . C2 H4 O) \times
       CCI PMS
              CM
                      3
              CRN 79-41-4
              CMF C4 H6 O2
 _{\text{Me}} = \bigcup_{-\text{CO}_2\text{H}}^{\text{CH}_2}
              CM
                    4
              CRN 79-10-7
              CMF C3 H4 O2
 но_Ü_сн__сн<sub>2</sub>
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H2N_U_CH__CH2
          СМ
               6
          CRN 75-21-8
          CMF C2 H4 O
 \stackrel{\circ}{ }
RN
     690210-61-8 HCAPLUS
     2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl
CN
     2-methyl-2-propenoate phosphate, oxirane and 2-propenoic acid,
     methyl ether, graft, sodium salt (9CI) (CA INDEX NAME)
     CM
     CRN 67-56-1
     CMF C H4 O
 нзс_он
     CM
        2
     CRN 690210-60-7
          (C6 H10 O3 . C4 H6 O2 . C3 H4 O2 . C2 H4 O . x H3 O4 P)x
     CMF
     CCI PMS
          CM
               3
          CRN 79-41-4
          CMF C4 H6 O2
 CH2
Me_U_CO2H
          CM
               4
          CRN 79-10-7
          CMF C3 H4 O2
```

но\_\_\_Сн\_\_\_сн\_\_

```
CM
                5
               75-21-8
          CRN
          CMF C2 H4 O
 \overset{\circ}{ }
           CM
          CRN 52628-03-2
           CMF C6 H10 O3 . \times H3 O4 P
                CM
                     7
                CRN 7664-38-2
                CMF H3 O4 P
                CM
                     8
                CRN 868-77-9
                CMF C6 H10 O3
 RN
     690210-70-9 HCAPLUS
     2-Propenoic acid, 2-methyl-, polymer with
CN
     \alpha \texttt{-[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-}
     \omega\text{-[[dimethyl[3-[(2-methyl-1-oxo-2-
     \verb|propenyl|| oxy|| propyl|| silyl|| oxy|| poly|| foxy|| (dimethylsilylene)||,
     methyloxirane, oxirane and 2-propenoic acid, methyl ether, graft,
     sodium salt (9CI) (CA INDEX NAME)
     CM
          1
     CRN 67-56-1
     CMF C H4 O
 H3C_OH
```

CM 2

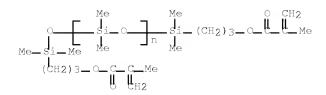
CRN 690210-69-6
CMF (C4 H6 O2 . C3 H6 O . C3 H4 O2 . (C2 H6 O Si)n C18 H34 O5 Si2 . C2 H4 O)x
CCI PMS

CM 3

CRN 58130-03-3

CMF (C2 H6 O Si)n C18 H34 O5 Si2

CCI PMS



CM 4

CRN 79-41-4 CMF C4 H6 O2

CM 5

CRN 79-10-7 CMF C3 H4 O2

CM 6

CRN 75-56-9 CMF C3 H6 O

CRN 75-21-8 CMF C2 H4 O



```
221881-27-2, Methacrylic acid-polyethylene glycol methyl
     ether methacrylate graft copolymer sodium salt
     381686-32-4, 2-Acrylamido-2-methylpropanesulfonic
     acid-acrylic acid-methacrylic acid-polyethylene glycol methyl
     ether methacrylate graft copolymer sodium salt
     381686~34~6, Acrylic acid-itaconic acid-methacrylic
     acid-polyethylene glycol methyl ether methacrylate graft copolymer
     sodium salt 381686~36~8, Acrylic acid-methacrylic
     acid-polyethylene glycol methyl ether methacrylate graft copolymer
     sodium salt 381686-45-9, Acrylic acid-methacrylic
     acid-polyethylene glycol methyl ether methacrylate graft copolymer
     potassium salt 381686-46-0, Acrylic acid-methacrylic
     acid-polyethylene glycol methyl ether methacrylate graft copolymer
     ammonium salt 381686~47~1, Acrylic acid-methacrylic
     acid-polyethylene glycol methyl ether methacrylate graft copolymer
     triethanolamine salt
                          381686~50~6, Acrylic
     acid-methacrylic acid-polyethylene glycol methyl ether
     methacrylate graft copolymer calcium sodium salt
     381686-51-7, Acrylic acid-methacrylic acid-polyethylene
     glycol methyl ether methacrylate graft copolymer magnesium sodium
            688810-67-5, Acrylic acid-methacrylic
     acid-polyethylene glycol methyl ether
     methacrylate-vinyltriethoxysilane graft copolymer sodium salt
     688810-69-7, Acrylic acid-methacrylic
     acid-3-(methacryloyloxy) propyltrimethoxysilane-polyethylene glycol
     methyl ether methacrylate graft copolymer sodium salt
     688810-71-1, Acrylic acid-methacrylic acid-polyethylene
     glycol methyl ether methacrylate-2-(perfluorodecyl)ethyl acrylate
     graft copolymer sodium salt 688810-73-3,
     Acrylamide-acrylic acid-methacrylic acid-polyethylene glycol
    methyl ether methacrylate graft copolymer sodium salt
     690210-52-7 690210-56-1
                                690210-59-4
    RL: MOA (Modifier or additive use); TEM (Technical or engineered
     material use); USES (Uses)
        (use of alkoxy- or hydroxypolyoxyalkylene-grafted acrylic
       polymers for improving optical brightener activity in paper
       coatings, textiles, detergents, and paints)
     221881-27-2 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, polymer with
     \alpha-(2-methyl-1-oxo-2-propen-1-yl)-\omega-methoxypoly(oxy-1,2-
     ethanediyl), graft, sodium salt (CA INDEX NAME)
     CM
         1
     CRN 111740-39-7
         (C4 H6 O2 . (C2 H4 O)n C5 H8 O2)x
     CCI PMS
         CM
               2
          CRN 26915-72-0
          CMF (C2 H4 O)n C5 H8 O2
          CCI PMS
```

CM 3

CRN 79-41-4 CMF C4 H6 O2

$$_{\text{Me}} = \overset{\text{CH2}}{\underset{\text{CO}_2\text{H}}{\text{H}}}$$

RN 381686-32-4 HCAPLUS 2-Propenoic acid, 2-methyl-, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid, $\alpha\text{-(2-methyl-1-oxo-2-propenyl)-}\omega\text{-methoxypoly(oxy-1,2-}$ ethanediyl) and 2-propenoic acid, graft, sodium salt (9CI) (CA INDEX NAME) CM 1 CRN 381686-31-3 CMF (C7 H13 N O4 S . C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x CCI PMS CM 2 CRN 26915-72-0 CMF (C2 H4 O)n C5 H8 O2 CCI PMS

CM 3

CRN 15214-89-8 CMF C7 H13 N O4 S

$$_{\text{Me}} = \bigcup_{-\text{CO}_2\text{H}}^{\text{CH}_2}$$

CM 5

CRN 79-10-7 CMF C3 H4 O2

RN 381686-34-6 HCAPLUS CN Butanedioic acid, methylene-, polymer with  $\alpha\text{-(2-methyl-1-oxo-2-propenyl)-}\theta\text{-methoxypoly(oxy-1,2-ethanediyl), 2-methyl-2-propenoic acid and 2-propenoic acid, graft, sodium salt (9CI) (CA INDEX NAME) }$ 

CM 1

CRN 381686-33-5 CMF (C5 H6 O4 . C4 H6 O2 . C3 H4 O2 . (C2 H4 O) n C5 H8 O2) x CCI PMS

CM 2

CRN 26915-72-0

CMF (C2 H4 O)n C5 H8 O2

CCI PMS

CM 3

CRN 97-65-4 CMF C5 H6 O4

CM 5

CRN 79-10-7 CMF C3 H4 O2

381686-36-8 HCAPLUS

RN

CN 2-Propenoic acid, 2-methyl-, polymer with  $\alpha-(2\text{-methyl-1-oxo-2-propen-1-yl})-\omega-\text{methoxypoly(oxy-1,2-ethanediyl)} \text{ and 2-propenoic acid, graft, sodium salt (CA INDEX NAME)}$  CM 1 CRN 381686-35-7 CMF (C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x CCI PMS

CM 2
CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS

CM 3

CRN 79-41-4 CMF C4 H6 O2

CRN 79-10-7 CMF C3 H4 O2



```
381686-45-9 HCAPLUS
RN
CN
     2-Propenoic acid, 2-methyl-, polymer with
     \alpha\text{-(2-methyl-1-oxo-2-propen-1-yl)-}\omega\text{-methoxypoly(oxy-1,2-}
     ethanediyl) and 2-propenoic acid, graft, potassium salt (CA INDEX
     NAME)
         1
     CM
     CRN 381686-35-7
     CMF (C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x
     CCI PMS
               2
          CM
          CRN 26915-72-0
          CMF (C2 H4 O)n C5 H8 O2
          CCI PMS
```

CM 3

CRN 79-41-4

CMF C4 H6 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2



RN 381686-46-0 HCAPLUS CN 2-Propenoic acid, <math>2-methyl-, polymer with

```
\alpha-(2-methyl-1-oxo-2-propenyl)-\omega-methoxypoly(oxy-1,2-
     ethanediyl) and 2-propenoic acid, graft, ammonium salt (9CI) (CA
     INDEX NAME)
     CM
          1
     CRN 381686-35-7
     CMF
          (C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x
     CCI PMS
          СМ
               2
          CRN 26915-72-0
          CMF (C2 H4 O)n C5 H8 O2
          О_СН2_СН2_
          СМ
          CRN 79-41-4
          CMF C4 H6 O2
 CH2
Me_U_CO2H
          СМ
               4
          CRN 79-10-7
          CMF C3 H4 O2
     381686-47-1 HCAPLUS
CN
     2-Propenoic acid, 2-methyl-, polymer with
     \alpha-(2-methyl-1-oxo-2-propenyl)-\omega-methoxypoly(oxy-1,2-
     ethanediyl) and 2-propenoic acid, graft, compd. with
     2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)
     CM
         1
     CRN 102-71-6
     CMF C6 H15 N O3
             CH2-CH2-OH
```

HO\_CH2\_CH2\_N\_CH2\_CH2\_OH

```
CM 2
     CRN 381686-35-7
     CMF (C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x
     CCI PMS
          CM
                3
          CRN 26915-72-0
          CMF (C2 H4 O)n C5 H8 O2
          CCI PMS
 CM
                4
          CRN 79-41-4
          CMF C4 H6 O2
 _{\text{Me}} = \overset{\text{CH2}}{\underset{\text{CO}_2\text{H}}{\text{H}}}
           CM
                5
          CRN 79-10-7
          CMF C3 H4 O2
     381686-50-6 HCAPLUS
RN
     2\text{-Propenoic acid}, 2\text{-methyl-}, polymer with
     \alpha-(2-methyl-1-oxo-2-propenyl)-\omega-methoxypoly(oxy-1,2-
     ethanediyl) and 2-propenoic acid, graft, calcium sodium salt (9CI)
       (CA INDEX NAME)
     CM
         1
     CRN 381686-35-7
     CMF (C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x
     CCI PMS
          CM
                2
          CRN 26915-72-0
```

CMF (C2 H4 O)n C5 H8 O2 CCI PMS

CM 3

CRN 79-41-4 CMF C4 H6 O2

$$_{\text{Me}}$$
  $\overset{\text{CH2}}{\underset{\text{CO}_{2}\text{H}}{\text{H}}}$ 

CM 4

CRN 79-10-7 CMF C3 H4 O2

RN 381686-51-7 HCAPLUS CN 2-Propenoic acid, 2-methyl-, polymer with  $\alpha\text{-(2-methyl-l-oxo-2-propenyl)-}\theta\text{-methoxypoly(oxy-1,2-}$ 

ethanediyl) and 2-propenoic acid, graft, magnesium sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 381686-35-7

CMF (C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x

CCI PMS

CM 2

CRN 26915-72-0

CMF (C2 H4 O)n C5 H8 O2

CCI PMS

CM 4

CRN 79-10-7 CMF C3 H4 O2

RN 688810-67-5 HCAPLUS CN 2-Propenoic acid, 2-methyl-, polymer with ethenyltriethoxysilane,  $\alpha\text{-}(2\text{-methyl-1-oxo-2-propenyl})-\omega\text{-methoxypoly}(\text{oxy-1,2-ethanediyl}) \text{ and 2-propenoic acid, graft, sodium salt (9CI)}$  (CA INDEX NAME)

CM 1

CRN 688810-66-4 CMF (C8 H18 O3 Si . C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x CCI PMS

CM 2

CRN 26915-72-0

CMF (C2 H4 O)n C5 H8 O2

CCI PMS

CM 3

CRN 79-41-4 CMF C4 H6 O2

CM 4

CM 5

CRN 78-08-0 CMF C8 H18 O3 Si

688810-69-7 HCAPLUS RN 2-Propenoic acid, 2-methyl-, polymer with CN  $\alpha$ -(2-methyl-1-oxo-2-propenyl)- $\omega$ -methoxypoly(oxy-1,2ethanediyl), 2-propenoic acid and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate, graft, sodium salt (9CI) (CA INDEX NAME) CM 1 CRN 688810-68-6 CMF (C10 H20 O5 Si . C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2) $\times$ CCI PMS CM 2 CRN 26915-72-0 CMF (C2 H4 O)n C5 H8 O2 CCI PMS

CM 3

CRN 2530-85-0 CMF C10 H20 O5 Si

```
CM
              4
         CRN 79-10-7
         CMF C3 H4 O2
 HO___CH___CH2
         СМ
              5
         CRN 79-06-1
         CMF C3 H5 N O
 H2N_U_CH_CH2
RN
    690210-52-7 HCAPLUS
    2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl
    bis(2-methyl-2-propenoate), methyloxirane,
    \alpha-(2-methyl-1-oxo-2-propenyl)-\omega-methoxypoly(oxy-1,2-
    ethanediyl), oxirane and 2-propenoic acid, butyl ether, block,
    graft, sodium salt (9CI) (CA INDEX NAME)
    CM
        1
    CRN 71-36-3
    CMF C4 H10 O
 H3C_CH2_CH2_CH2_OH
    CM 2
    CRN 690210-51-6
    CMF (C10 H14 O4 . C4 H6 O2 . C3 H6 O . C3 H4 O2 . (C2 H4 O)n C5
         H8 O2 . C2 H4 O)x
    CCI PMS
              3
         CM
         CRN 26915-72-0
         CMF (C2 H4 O)n C5 H8 O2 CCI PMS
```

CM 4

CRN 97-90-5

CMF C10 H14 O4



CM 5

CRN 79-41-4

CMF C4 H6 O2

$$_{\text{Me}}$$
  $\overset{\text{CH2}}{\underset{\text{CO}_{2}\text{H}}{\text{H}}}$ 

CM 6

CRN 79-10-7 CMF C3 H4 O2



CM 7

CRN 75-56-9 CMF C3 H6 O



CM 8

CRN 75-21-8 CMF C2 H4 O



```
690210-56-1 HCAPLUS
CN
     2-Propenoic acid, 2-methyl-, polymer with
    \alpha-[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-
     \omega-[[dimethyl[3-[(2-methyl-1-oxo-2-
     propenyl)oxy]propyl]silyl]oxy]poly[oxy(dimethylsilylene)],
    methyloxirane, \alpha-(2-methyl-1-oxo-2-propenyl)-\omega-
    methoxypoly(oxy-1,2-ethanediyl), oxirane and 2-propenoic acid,
    methyl ether, block, graft, sodium salt (9CI) (CA INDEX NAME)
     CM
        1
     CRN 67-56-1
     CMF C H4 O
 Н3С_ОН
     CM
          2
     CRN 690210-55-0
         (C4 H6 O2 . C3 H6 O . C3 H4 O2 . (C2 H6 O Si)n C18 H34 O5 Si2
          . (C2 H4 O)n C5 H8 O2 . C2 H4 O)\times
     CCI PMS
         CM
              3
         CRN 58130-03-3
          CMF (C2 H6 O Si)n C18 H34 O5 Si2
                      Me
.Si_ (CH<sub>2</sub>)3_0_U_U_Me
    (CH2)3_0_C_C_Me
          CM
         CRN 26915-72-0
          CMF (C2 H4 O)n C5 H8 O2
          CCI PMS
```

CM 5

CRN 79-41-4 CMF C4 H6 O2

CM 6

CRN 79-10-7 CMF C3 H4 O2

CM 7

CRN 75-56-9 CMF C3 H6 O



CM 8

CRN 75-21-8 CMF C2 H4 O

# $\overset{\circ}{\bigtriangleup}$

RN 690210-59-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl
2-methyl-2-propenoate phosphate,
α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) and 2-propenoic acid, graft, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 690210-58-3

CMF (C6 H10 03 . C4 H6 02 . C3 H4 02 . (C2 H4 0)n C5 H8 02 . x H3 04 P)x

CCI PMS

CM 2

CRN 26915-72-0

CMF (C2 H4 O)n C5 H8 O2 CCI PMS

CM 3

CRN 79-41-4 CMF C4 H6 O2

$$_{\text{Me}}$$

CM 4

CRN 79-10-7 CMF C3 H4 O2

CM 5

CRN 52628-03-2

CMF C6 H10 O3 .  $\times$  H3 O4 P

CM 6

CRN 7664-38-2 CMF H3 O4 P

CM 7

CRN 868-77-9 CMF C6 H10 O3

```
H2C O
Me_U_U_O_CH2_CH2_OH
```

```
ICM D21H021-32
IC
    ICS D21H019-36; D06L003-00; C11D003-37; C11D003-42; C08F290-14
    43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
CC
     Section cross-reference(s): 40, 42, 46
    221882-30-0, Ethylene oxide-methacrylic acid graft
     copolymer methyl ether sodium salt 256335-43-0, Acrylic
     acid-ethylene oxide graft copolymer methyl ether sodium salt
    256511-28-1, Acrylic acid-ethylene oxide-methacrylic acid
    graft copolymer methyl ether sodium salt 291536-23-7, Acrylic
    acid-ethyl acrylate-ethylene oxide graft copolymer methyl ether
    sodium salt 381164-42-7 382162-06-3
    382162-09-6
                 382162-32-5 382162-40-5
    382162-56-3, Acrylic acid-ethylene oxide-methacrylic acid
    graft copolymer methyl ether triethanolamine salt
     382162-62-1 382162-65-4 690210-47-0
     690210-48-1 690210-50-5 690210-54-9
     690210-57-2 690210-61-8 690210-63-0
     690210-70-9 690224-11-4
    RL: MOA (Modifier or additive use); TEM (Technical or engineered
    material use); USES (Uses)
        (comprised actual and assumed monomers; use of alkoxy- or
       hydroxypolyoxyalkylene-grafted acrylic polymers for improving
       optical brightener activity in paper coatings, textiles,
       detergents, and paints)
    221881-27-2, Methacrylic acid-polyethylene glycol methyl
IΤ
     ether methacrylate graft copolymer sodium salt
     381686-32-4, 2-Acrylamido-2-methylpropanesulfonic
    acid-acrylic acid-methacrylic acid-polyethylene glycol methyl
     ether methacrylate graft copolymer sodium salt
     381686-34-6, Acrylic acid-itaconic acid-methacrylic
     acid-polyethylene glycol methyl ether methacrylate graft copolymer
     sodium salt 381686-35-7, Acrylic acid-methacrylic
     acid-polyethylene glycol methyl ether methacrylate graft copolymer
     381686~36~8, Acrylic acid-methacrylic acid-polyethylene
     glycol methyl ether methacrylate graft copolymer sodium salt
     381686-45-9, Acrylic acid-methacrylic acid-polyethylene
     glycol methyl ether methacrylate graft copolymer potassium salt
    381686-46-0, Acrylic acid-methacrylic acid-polyethylene
     glycol methyl ether methacrylate graft copolymer ammonium salt
    381686-47-1, Acrylic acid-methacrylic acid-polyethylene
    glycol methyl ether methacrylate graft copolymer triethanolamine
           381686~50~6, Acrylic acid-methacrylic
    acid-polyethylene glycol methyl ether methacrylate graft copolymer
    calcium sodium salt
                         381686~51~7, Acrylic
    acid-methacrylic acid-polyethylene glycol methyl ether
    methacrylate graft copolymer magnesium sodium salt
                                                        688810-65-3
     688810-67-5, Acrylic acid-methacrylic acid-polyethylene
     qlycol methyl ether methacrylate-vinyltriethoxysilane graft
     copolymer sodium salt 688810-69-7, Acrylic
     acid-methacrylic acid-3-(methacryloyloxy)propyltrimethoxysilane-
     polyethylene glycol methyl ether methacrylate graft copolymer
     sodium salt 688810-71-1, Acrylic acid-methacrylic
     acid-polyethylene glycol methyl ether
    methacrylate-2-(perfluorodecyl)ethyl acrylate graft copolymer
    sodium salt 688810-73-3, Acrylamide-acrylic
     acid-methacrylic acid-polyethylene glycol methyl ether
    methacrylate graft copolymer sodium salt
                                               688810-74-4
     690210-52-7
                  690210-56-1
                               690210-59-4
    RL: MOA (Modifier or additive use); TEM (Technical or engineered
    material use); USES (Uses)
```

(use of alkoxy- or hydroxypolyoxyalkylene-grafted acrylic polymers for improving optical brightener activity in paper coatings, textiles, detergents, and paints)

OS.CITING REF COUNT:

9 THERE ARE 9 CAPLUS RECORDS THAT CITE

THIS RECORD (9 CITINGS)

REFERENCE COUNT: THERE ARE 6 CITED REFERENCES AVAILABLE 6

FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L83 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2004:181793 HCAPLUS Full-text

DOCUMENT NUMBER: 140:218990

TITLE: Wellbore cementing compositions from aqueous

sluxxies containing acid degradable

glass and water soluble

polyalkenoic acid for composites with elasticity or high compressive strength and

low permeability

INVENTOR(S): Funkhouser, Gary P.; Eoff, Larry S.; Norman,

Lewis R.

PATENT ASSIGNEE(S): Halliburton Energy Services, Inc., USA

SOURCE: Eur. Pat. Appl., 6 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent English LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PA:	PATENT NO.					D DAT	Έ	API	APPLICATION NO.					
EP	1394135				A2	200	20040303		2003-		2003 0822			
									<					
	R:	MC,	PT,	IE,				GB, GI RO, MI			,		•	
US	2004		HU, 714		A1	200	040304	US	2002-	2319	71			
													2002 0830	
									<					
CA	2436	454			A1	200	040229	CA	2003-	2436	454			
													2003 0804	
									<					
US	2005	0038:	164		A1	200	50217	US	2004-	9037	72			
													2004	
									<				0730	
IIS	7238	229			в2	200	70703							
PRIORITY			INFO	. :		200	,,,,,,,		2002-	2319	71	1	A	
													2002	
													0830	
									<					

ED Entered STN: 05 Mar 2004

Wellbores are cemented using cement compns. having elasticity or high compressive AB strength and low permeability, basically comprised of particulate acid degradable glass, water, at least one water soluble polyalkenoic acid, or at least one water scluble polymerizable alkenoic acid monomer and a water soluble free-radical initiator. Some well cementing applications a cement composition is required that upon setting has a higher compressive strength and lower permeability than conventional hydraulic cement compns. The cement composition contains sufficient water to form a slurry and a water soluble polyalkenoic acid that reacts with the acid degradable glass to form a cement mass. Thus, a cement composition was prepared by combining a 30 % by weight water solution of a copolymer of acrylic acid and itaconic acid (weight ratio of 7:3, resp.)

```
with particulate acid degradable glass. The composition was cured for 24\ h at 73\ ^{\circ}\text{F},
     after which the composition had a compressive strength of 2912 psi.
     25087-26-7, Methacrylic acid homopolymer
     25948-33-8, Acrylic acid-itaconic acid copolymer
     RL: CPS (Chemical process); MOA (Modifier or additive use); PEP
     (Physical, engineering or chemical process); TEM (Technical or
     engineered material use); PROC (Process); USES (Uses)
        (aqueous slurries; wellbore cementing compns. from aqueous
        slurries containing acid degradable glass and water
        soluble polyalkenoic acid for elasticity or high
        compressive strength and low permeability)
     25087-26-7 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, homopolymer (CA INDEX NAME)
CN
     CM
     CRN 79-41-4
     CMF C4 H6 O2
    CH2
 Me_U_CO2H
     25948-33-8 HCAPLUS
CN
     Butanedioic acid, 2-methylene-, polymer with 2-propenoic acid (CA
     INDEX NAME)
     СМ
         1
     CRN 97-65-4
     CMF C5 H6 O4
      CH2
 но2С_€_Сн2_Со2Н
          2
     CM
     CRN 79-10-7
     CMF C3 H4 O2
 но__ _ Сн___ сн__
     102-71-6, Triethanolamine, uses
     RL: CPS (Chemical process); MOA (Modifier or additive use); PEP
     (Physical, engineering or chemical process); TEM (Technical or
     engineered material use); PROC (Process); USES (Uses)
        (reducing agent; wellbore cementing compns. from aqueous
        slurries containing acid degradable glass and water
        soluble polyalkenoic acid for elasticity or high
        compressive strength and low permeability)
RN
     102-71-6 HCAPLUS
```

Ethanol, 2,2',2''-nitrilotris- (CA INDEX NAME)

CN

CH2-CH2-OH

HO\_CH2\_CH2\_N\_CH2\_CH2\_OH

```
79-41-4, Methacrylic acid, uses 97-65-4,
ΤТ
     Itaconic acid, uses
     RL: CPS (Chemical process); PEP (Physical, engineering or chemical
     process); TEM (Technical or engineered material use); PROC
     (Process); USES (Uses)
        (water-soluble polymers; wellbore cementing
        compns. from aqueous whurries containing acid degradable
        glass and water soluble polyalkenoic acid for
        elasticity or high compressive strength and low permeability)
     79-41-4 HCAPLUS
RN
CN
     2-Propenoic acid, 2-methyl- (CA INDEX NAME)
    CH<sub>2</sub>
 Me_U_CO2H
     97-65-4 HCAPLUS
RN
     Butanedioic acid, 2-methylene- (CA INDEX NAME)
      CH2
 но2С_€_СН2_СО2Н
TC
    ICM C04B028-08
     ICS C04B028-00; E21B033-13
CC
     38-3 (Plastics Fabrication and Uses)
     Section cross-reference(s): 51, 58
     cementing wellbore water sol polymer acid
ST
     degradable glass curing; compressive strength permeability polymer
     glass cementing composite
ΙT
     Glass, uses
     RL: CPS (Chemical process); MOA (Modifier or additive use); PEP
     (Physical, engineering or chemical process); TEM (Technical or
     engineered material use); PROC (Process); USES (Uses)
        (acid degradable; wellbore cementing compns. from aqueous
        slurries containing acid degradable glass and water
        soluble polyalkenoic acid for elasticity or high
        compressive strength and low permeability)
ΙT
     Slurries
        (aqueous, polymer-acid degradable glass; wellbore cementing compns.
        from aqueous slurries containing acid degradable glass and
        water soluble polyalkenoic acid for elasticity
        or high compressive strength and low permeability)
ΙT
     Composites
        (polymer-glass particulate; wellbore cementing compns. from aqueous
        slurries containing acid degradable glass and water
        soluble polyalkenoic acid for elasticity or high
        compressive strength and low permeability)
TT
     Polymerization catalysts
        (radical, water-soluble; wellbore cementing
        compns. from aqueous slurries containing acid degradable
        glass and water soluble polyalkenoic acid for
        elasticity or high compressive strength and low permeability)
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ΤТ
     Fatty acids, uses
     RL: CPS (Chemical process); PEP (Physical, engineering or chemical
     process); TEM (Technical or engineered material use); PROC
     (Process); USES (Uses)
        (unsatd., water-soluble polymers; wellbore
        cementing compns. from aqueous sluxries containing acid
        degradable glass and water soluble
        polyalkenoic acid for elasticity or high compressive strength
        and low permeability)
     Polymers, uses
     RL: CPS (Chemical process); MOA (Modifier or additive use); PEP
     (Physical, engineering or chemical process); TEM (Technical or
     engineered material use); PROC (Process); USES (Uses)
        (water-soluble, aqueous slurries
        ; wellbore cementing compns. from aqueous slurries containing
        acid degradable glass and water soluble
        polyalkenoic acid for elasticity or high compressive strength
        and low permeability)
ΙT
     Compressive strength
     Wells
        (wellbore cementing compns. from aqueous slurries containing
        acid degradable glass and water soluble
        polyalkenoic acid for elasticity or high compressive strength
        and low permeability)
ΙT
     Cement
        (wellbore, polymer-glass composite; wellbore cementing compns.
        from aqueous slurries containing acid degradable glass and
        water soluble polyalkenoic acid for elasticity
        or high compressive strength and low permeability)
     9003-01-4, Acrylic acid homopolymer
ΙT
                                         25087-26-7.
     Methacrylic acid homopolymer
                                    25948-33-8, Acrylic
     acid-itaconic acid copolymer
     RL: CPS (Chemical process); MOA (Modifier or additive use); PEP
     (Physical, engineering or chemical process); TEM (Technical or
     engineered material use); PROC (Process); USES (Uses)
        (aqueous slurries; wellbore cementing compns. from aqueous
        slurries containing acid degradable glass and water
        soluble polyalkenoic acid for elasticity or high
        compressive strength and low permeability)
     7631-86-9, Silica, uses
     RL: MOA (Modifier or additive use); TEM (Technical or engineered
     material use); USES (Uses)
        (flour, filler; wellbore cementing compns. from aqueous
        slurries containing acid degradable glass and water
        soluble polyalkenoic acid for elasticity or high
        compressive strength and low permeability)
     1332-37-2, Iron oxide, uses
     RL: MOA (Modifier or additive use); TEM (Technical or engineered
     material use); USES (Uses)
        (powdered, filler; wellbore cementing compns. from aqueous
        slurries containing acid degradable glass and water
        soluble polyalkenoic acid for elasticity or high
        compressive strength and low permeability)
     102-71-6, Triethanolamine, uses 7631-90-5, Sodium
                7772-98-7, Sodium thiosulfate
     RL: CPS (Chemical process); MOA (Modifier or additive use); PEP
     (Physical, engineering or chemical process); TEM (Technical or
     engineered material use); PROC (Process); USES (Uses)
        (reducing agent; wellbore cementing compns. from aqueous
        slurries containing acid degradable glass and water
        soluble polyalkenoic acid for elasticity or high
        compressive strength and low permeability)
     75-91-2, tert-Butyl hydroperoxide
                                        2638-94-0,
     4,4'-Azobis(4-cyanovaleric acid)
                                        2997-92-4,
     2,2'-Azobis(2-methylpropionamidine) dihydrochloride
     Hydrogen peroxide, uses 7727-54-0, Ammonium persulfate
     7775-27-1, Sodium persulfate
                                   10288-28-5 27776-21-2,
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2,2'-Azobis[2-(2-imidazolin-2-yl)propane] dihydrochloride
        61551-69-7, 2,2'-Azobis[2-methyl-N-(2-hydroxyethyl)propionamide]
        115947-73-4
        RL: CPS (Chemical process); MOA (Modifier or additive use); PEP
        (Physical, engineering or chemical process); TEM (Technical or
        engineered material use); PROC (Process); USES (Uses)
             (water-soluble free-radical initiator;
             wellbore cementing compns. from aqueous slurries containing
             acid degradable glass and water soluble
             polyalkenoic acid for elasticity or high compressive strength
             and low permeability)
        79-10-7, Acrylic acid, uses 79-41-4, Methacrylic acid,
ΙT
        uses 97-65-4, Itaconic acid, uses 110-16-7, Maleic
        acid, uses 25249-16-5 25703-79-1 26022-14-0, Hydroxyethyl
        acrylate polymer 32029-53-1, Hydroxypropyl acrylate polymer
        89856-34-8, 2-Butene-1,2,3-tricarboxylic acid
        RL: CPS (Chemical process); PEP (Physical, engineering or chemical
        process); TEM (Technical or engineered material use); PROC
        (Process); USES (Uses)
             (water-soluble polymers; wellbore cementing
             compns. from aqueous sluxxies containing acid degradable
             glass and water soluble polyalkenoic acid for
             elasticity or high compressive strength and low permeability)
L83 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:
                                        2003:194826 HCAPLUS Full-text
DOCUMENT NUMBER:
                                         138:223173
TITLE:
                                         Acrylamide polymer-based strengthening agent
                                         for papermaking
INVENTOR(S):
                                         Nakamura, Kenichi; Kiyota, Kenzo; Doi,
                                         Hirotoshi
PATENT ASSIGNEE(S):
                                     Mitsui Chemicals Inc., Japan
SOURCE:
                                         Jpn. Kokai Tokkyo Koho, 8 pp.
                                         CODEN: JKXXAF
DOCUMENT TYPE:
                                         Patent
LANGUAGE:
                                         Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
                                 KIND DATE APPLICATION NO.
        PATENT NO.
                                                                                                                DATE
                                         ----
        -----
        JP 2003073991 A
                                                     20030312 JP 2001-259250
                                                                                                                 2001
                                                                                                                 0829
                                                                              <--
PRIORITY APPLN. INFO.:
                                                                         JP 2001-259250
                                                                                                                 2001
                                                                                                                 0829
                                                                               <---
ED
        Entered STN: 12 Mar 2003
AΒ
        Title strengthening composition, for papermaking from a pulp slurry of elec.
         conductivity \geq 0.8 mS/cm, comprises (A) amphoteric polyacrylamides containing \alpha, \beta-
         unsatd. sulfonic acids (sulfonates) 0.01-5 and crosslinkable monomers 0.001-5 mol%, (B)
         anionic polyacrylamides, and (C) water-sol . aluminum compds. Thus, a pulp slurry
         obtained from waste corrugated paper was added with acrylamide-itaconic acid-
         {\tt methacryloyloxyethyldimethylbenzylammonium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-methylenebisacrylamide-sodium~chloride-sodium~chloride-sodium~chloride-sodium~chloride-sodium~chloride-sodium~chloride-sodium~chloride-sodium~chloride-sodium~chloride-sodium~chloride-sodium~chlor
         methally
1sulfonate copolymer 0.6, Accurac 304E 0.03, and aluminum sulfate 1.5% and
         formed into a sheet showing JIS-P8126 compression factor 186 N·m2/q, Japan Tappi Number
         29-78 surface compression factor 156 N·m2/q, fiber orientation factor 1,34, and
        permeability 26 s.
        501004-29-19
IΤ
        RL: IMF (Industrial manufacture); NUU (Other use, unclassified);
        PREP (Preparation); USES (Uses)
             (acrylamide polymer-based strengthening agent for papermaking)
        501004-29-1 HCAPLUS
RN
```

- CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with N,N'-methylenebis[2-propenamide], methylenebutanedioic acid, 2-propenamide and sodium 2-methyl-2-propene-1-sulfonate (9CI) (CFINDEX NAME)
  - CM 1
  - CRN 46917-07-1
  - CMF C15 H22 N O2 . C1
- Ph\_CH<sub>2</sub>\_N+ CH<sub>2</sub>\_CH<sub>2</sub>\_O\_UCH<sub>2</sub> Me
  - cl-
  - CM 2
  - CRN 1561-92-8
  - CMF C4 H8 O3 S . Na
- $\text{Me} = \bigcup_{-\text{CH2}-\text{SO3H}}^{\text{CH2}}$ 
  - Na
  - CM 3
  - CRN 110-26-9
  - CMF C7 H10 N2 O2
- - CM 4
  - CRN 97-65-4
  - CMF C5 H6 O4
- СН2 НО2С\_\_\_\_\_СН2\_\_ СО2Н

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CM
        5
     CRN 79-06-1
     CMF C3 H5 N O
 H2N_ U_ CH__ CH2
    ICM D21H017-37
     ICS C08F220-56; C08F265-10; C08K003-30; C08L033-26; D21H017-43;
          D21H017-66; D21H021-10; D21H021-18
     43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
CC
    501004-29-19
IT
     RL: IMF (Industrial manufacture); NUU (Other use, unclassified);
     PREP (Preparation); USES (Uses)
        (acrylamide polymer-based strengthening agent for papermaking)
L83 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:516819 HCAPLUS Full-text
DOCUMENT NUMBER:
                        137:186842
TITLE:
                        Application of surfactants for treatment of
                        tire rubber blends
AUTHOR(S):
                        Sakibaeva, S. A.; Eskaraeva, G. Z.;
                        Tasanbaeva, N. E.; Sataev, I. K.
CORPORATE SOURCE:
                        Yuzhno-Kaz. Gos. Univ. im. M. Auezova,
                        Kazakhstan
SOURCE:
                        O'zbekiston Kimyo Jurnali (2002),
                        (1), 72-75
                        CODEN: OKJZA6; ISSN: 0042-1707
PUBLISHER:
                        Izdatel'stvo Fan
DOCUMENT TYPE:
                        Journal
LANGUAGE:
                        Russian
    Entered STN: 12 Jul 2002
ED
     Compns. containing water-scaluble surface-active hydrolyzed (and modified)
AB
     acrylonitrile-Me acrylate-itaconic acid copolymers K-4 K-9, and zeolites were used as
     antisticking agents for SKI-3 isoprene rubber blends. Studied surfactants exhibited
     good antisticking properties and cause no metal corrosion over long time periods.
     141-43-5D, Monoethanolamine, reaction products with
     hydrolyzed acrylonitrile-Me acrylate-itaconic acid copolymer
     27056-80-0D, Acrylonitrile-methyl acrylate-itaconic acid
     copolymer, hydrolyzed, (reaction products with epoxy resin,
     triglycidyl ether, or monoethanolamine)
     RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
        (surfactants compns. as antisticking agents for tire rubber
       blends)
RN
     141-43-5 HCAPLUS
    Ethanol, 2-amino- (CA INDEX NAME)
CN
 H2N_CH2_CH2_OH
RN
     27056-80-0 HCAPLUS
     Butanedioic acid, 2-methylene-, polymer with methyl 2-propenoate
     and 2-propenenitrile (CA INDEX NAME)
     CM
         1
     CRN 107-13-1
     CMF C3 H3 N
```

 ${\tt H2C} = {\tt CH-C} = {\tt N}$ 

CM 2

CRN 97-65-4 CMF C5 H6 O4

 $_{\text{HO}_2\text{C}} = \overset{\text{CH}_2}{\underset{-}{\text{CH}_2}} = \text{CO}_2\text{H}$ 

CM 3

CRN 96-33-3 CMF C4 H6 O2

MeO\_ $\mathbb{U}$ \_CH\_\_CH2

CC 39-13 (Synthetic Elastomers and Natural Rubber)

IT 141-43-50, Monoethanolamine, reaction products with hydrolyzed acrylonitrile-Me acrylate-itaconic acid copolymer 9004-32-4, Carboxymethylcellulose 9038-24-8, K 4 14807-96-6, Talc, properties 25014-41-9D, Polyacrylonitrile, hydrolyzed 27056-80-0D, Acrylonitrile-methyl acrylate-itaconic acid copolymer, hydrolyzed, (reaction products with epoxy resin, triglycidyl ether, or monoethanolamine) 37221-33-3, Progress 52433-97-3, K 9

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses) (surfactants compns. as antisticking agents for tire rubber blends)

L83 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:923659 HCAPLUS Full-text
DOCUMENT NUMBER: 136:55575

TITLE: Use of weakly anionic copolymers as

dispersing and/or grinding aid agent of an aqueous suspension of mineral

materials

INVENTOR(S):
Suau, Jean-Marc; Jacquemet, Christian;

Mongoin, Jacques

PATENT ASSIGNEE(S): Coatex S.A.S., Fr.

SOURCE: PCT Int. Appl., 110 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

WO	2001096007				A1	20011220				WO	2001-	-FR18		2001	
	W:	AU,	BA,	BG,	BR,	CA,	CN,	co,	CZ,	HR	< R, HU	, ID,	IN,	JP,	0612 KR,
	RW:	AT,	BE,	CH,	CY,	DE,					R, GB	, ZA , GR,	ΙE,	IT,	LU,
FR	2810	-	NL,	P1,	ъв, А1		2001	1221		FR	2000-	-7639			2000 0615
	2810 2410				B1 A1		2002 2001	0830 1220		CA	2001	-2410	518		
											<				2001 0612
BR	2001	0116	16		A		2003	0318		BR		-1161	6		2001 0612
EP	1294	476			A1		2003	0326		EP		-9453	95		2001 0612
		MC,			SI,	FI,	RO,	CY,	TR			, LI,		NL,	SE,
TW	5523	37			В		2003	0911		TW		-9011	4132		2001 0612
AU	2001.	2676:	27		В2		2006	0803		AU		-2676	27		2001 0612
EP	1762	297			A2		2007	0314		EP	< 2006	-2357	5		2001 0612
EP	1762				А3		2008				<				
EP	R: 1795	LU,	BE, MC,			SE,	TR					, GR, -2355		IT,	LI,
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EP	1795 R:	AT,			CY,	DE,			FI,	FR	R, GB	, GR,	ΙE,	IT,	LI,
ИО	2002	0058	09		A		2003	0122		ИО	2002	-5809			2002 1203
MX	2002	0121	<b>6</b> 2		А		2003	0606			< 2002	-1216	2		2002 1209
KR	8137	85			В1		2008	0313		KR	< 2002	-7170	94		2002 1214
ZA	2003	0001	53		А		2004	0210		ZA	< 2003	-153			2003 0107
US	2004	0019	148		Α1		2004	0129		US	< 2003-	-3112	19		2003

Page 91

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0702
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    US 20050143511
                         B2
                               20050920
                         A1
                               20050630
                                           US 2005-46887
                                                                   2005
                                                                   0201
                                               <--
PRIORITY APPLN. INFO.:
                                           FR 2000-7639
                                                                   2000
                                                                   0615
                                            EP 2001-945395
                                                               А3
                                                                   2001
                                                                   0612
                                               <---
                                           WO 2001-FR1804
                                                                   2001
                                                                   0612
                                            US 2003-311219
                                                                   2003
                                                                   0702
                                               <--
ΕD
    Entered STN: 21 Dec 2001
    The invention concerns the use of a weakly anionic and water soluble copolymer, as
AB
     dispersing and/or grinding aid agent of pigments and/or mineral fillers in aqueous
     suspension providing a low zeta potential to aqueous suspensions of said fillers and/or
     pigments and providing electro-steric stabilization to said suspensions. The invention
     also concerns said aqueous suspensions of pigments and/or mineral fillers and their
     uses in the fields of paper industry, for making or coating paper, drilling mud for oil
     exploration and extraction The invention also concerns the use of said dispersing
     and/or grinding aid agents in the fields of paints and plastic materials such as
     thermoplastic or thermosetting resins. Typical weakly anionic copolymers are
     manufactured from (a) \geq 1 ethylenically unsatd. carboxylic acid selected from
     (meth)acrylic acid and mono-Cl-4 alkyl esters of maleic or itaconic acid, (b) monoalkyl
     ethers of oxirane, methyloxirane, or ethyloxirane polymers having unsatd. groups on the
     ends opposite the ether groups, and, optionally, (c) other monomers.
    221881-27-2 221882-30-0
    256511-28-1 381686-32-4 381686-34-6
    381686-36-8 381686-40-4 381686-45-9
    381686-46-0 381686-47-1 381686-48-2
    381686-50-6 381686-51-7 382156-65-2
    382156-79-8 382162-06-3 382162-09-6
     382162-29-0 382162-32-5 382162-40-5
    382162-56-3 382162-58-5 382162-62-1
    382162-65-4
    RL: NUU (Other use, unclassified); USES (Uses)
        (use of weakly anionic copolymers as dispersing
       and/or grinding aid agent of aqueous suspensions of
       mineral materials)
RN
    221881-27-2 HCAPLUS
    2-Propenoic acid, 2-methyl-, polymer with
CN
    \alpha-(2-methyl-1-oxo-2-propen-1-yl)-\omega-methoxypoly(oxy-1,2-
    ethanediyl), graft, sodium salt (CA INDEX NAME)
    CM
         1
    CRN 111740-39-7
    CMF (C4 H6 O2 . (C2 H4 O)n C5 H8 O2)x
    CCT PMS
         CM
         CRN 26915-72-0
         CMF (C2 H4 O)n C5 H8 O2
```

CCT PMS

CM 3

CRN 79-41-4 CMF C4 H6 O2

RN 221882-30-0 HCAPLUS CN 2-Propenoic acid, 2-methyl-, polymer with oxirane, methyl ether, graft, sodium salt (CA INDEX NAME)

CM 1

CRN 67-56-1 CMF C H4 O

нзс-он

CM 2

CRN 167763-01-1

CMF (C4 H6 O2 . C2 H4 O)x CCI PMS

3 CM

CRN 79-41-4 CMF C4 H6 O2

CM

CRN 75-21-8

CMF C2 H4 O

```
RN
      256511-28-1 HCAPLUS
      2{\rm -Propenoic} acid, 2{\rm -methyl-}, polymer with oxirane and 2{\rm -propenoic} acid, methyl ether, graft, sodium salt (CA INDEX NAME)
CN
      CM
           1
      CRN 67-56-1
      CMF C H4 O
 Н3С_ОН
      CM
           2
      CRN 159106-91-9
           (C4 H6 O2 . C3 H4 O2 . C2 H4 O) x
      CCI PMS
                    3
             CM
             CRN 79-41-4
             CMF C4 H6 O2
 СH2
Me_U_СО2Н
             CM
             CRN 79-10-7
             CMF C3 H4 O2
 но_<mark>©</mark>_сн__сн<sub>2</sub>
                    5
             CM
             CRN 75-21-8
             CMF C2 H4 O
 \overset{\circ}{\hookrightarrow}
      381686-32-4 HCAPLUS
RN
CN
      2-Propenoic acid, 2-methyl-, polymer with
```

2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid,

 $\alpha\text{-}(2\text{-methyl-}1\text{-}oxo\text{-}2\text{-propenyl})\text{-}\omega\text{-methoxypoly}(oxy\text{-}1,2\text{-}ethanediyl)$  and 2-propenoic acid, graft, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 
$$381686-31-3$$
 CMF (C7 H13 N O4 S . C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x CCI PMS

CM 2

CRN 26915-72-0

CMF (C2 H4 O)n C5 H8 O2

CCI PMS

CM 3

CRN 15214-89-8 CMF C7 H13 N O4 S

CM 4

CRN 79-41-4 CMF C4 H6 O2

CM 5

CRN 79-10-7 CMF C3 H4 O2

```
RN
     381686-34-6 HCAPLUS
     Butanedioic acid, methylene-, polymer with
     \alpha\text{-(2-methyl-1-oxo-2-propenyl)-}\theta\text{-methoxypoly(oxy-1,2-}
     ethanediyl), 2-methyl-2-propenoic acid and 2-propenoic acid,
     graft, sodium salt (9CI) (CA INDEX NAME)
         1
     CM
     CRN 381686-33-5
     CMF (C5 H6 O4 . C4 H6 O2 . C3 H4 O2 . (C2 H4 O) n C5 H8 O2) \boldsymbol{x}
     CCI PMS
          CM
               2
          CRN 26915-72-0
          CMF (C2 H4 O)n C5 H8 O2
          CCI PMS
3
          CM
          CRN 97-65-4
          CMF C5 H6 O4
 сн<sub>2</sub>
но₂с_Щ_сн<sub>2</sub>_со₂н
          CM
               4
          CRN 79-41-4
          CMF C4 H6 O2
    CH2
 Me_U_CO2H
          CM
               5
          CRN 79-10-7
          CMF C3 H4 O2
 но_ Сн_ сн_
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381686-36-8 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, polymer with
     \alpha\text{-(2-methyl-1-oxo-2-propen-1-yl)-}\omega\text{-methoxypoly(oxy-1,2-world)}
     ethanediyl) and 2-propenoic acid, graft, sodium salt (CA INDEX
     NAME)
     CM
         1
     CRN 381686-35-7
     CMF (C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x
     CCI PMS
          СМ
               2
          CRN 26915-72-0
          CMF (C2 H4 O)n C5 H8 O2
          CCI PMS
 CM
               3
          CRN 79-41-4
          CMF C4 H6 O2
 СH2
Me_Ц_СО2Н
          CM
          CRN 79-10-7
          CMF C3 H4 O2
 но_ (__ сн__ сн2
     381686-40-4 HCAPLUS
RN
CN
     2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl
     bis(2-methyl-2-propenoate),
     \alpha-(2-methyl-1-oxo-2-propenyl)-\omega-methoxypoly(oxy-1,2-
     ethanediyl) and 2-propenoic acid, graft, sodium salt (9CI) (CA
     INDEX NAME)
     CM
         1
     CRN 381686-39-1
     CMF (C10 H14 O4 . C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x
     CCI PMS
```

CRN 97-90-5 CMF C10 H14 O4

CM 4

CRN 79-41-4

CMF C4 H6 O2

CM 5

CRN 79-10-7

CMF C3 H4 O2

RN 381686-45-9 HCAPLUS 
CN 2-Propenoic acid, 2-methyl-, polymer with  $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -methoxypoly(oxy-1,2-ethanediyl) and 2-propenoic acid, graft, potassium salt (CA INDEX NAME) 
CM 1 
CRN 381686-35-7 
CMF (C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x 
CCI PMS

$$_{\text{Me}} = \overset{\text{CH2}}{\underset{\text{CO}_2\text{H}}{\text{H}}}$$

```
RN
     381686-51-7 HCAPLUS
CN
     2-Propenoic acid, 2-methyl-, polymer with
    \alpha-(2-methyl-1-oxo-2-propenyl)-\omega-methoxypoly(oxy-1,2-
     ethanediyl) and 2-propenoic acid, graft, magnesium sodium salt
     (9CI) (CA INDEX NAME)
     CM
        1
    CRN 381686-35-7
    CMF (C4 H6 O2 . C3 H4 O2 . (C2 H4 O)n C5 H8 O2)x
    CCI PMS
         CM
               2
         CRN 26915-72-0
         CMF (C2 H4 O)n C5 H8 O2
          CCI PMS
3
         CM
         CRN 79-41-4
          CMF C4 H6 O2
    CH2
Me_Ŭ_CO2H
          CM
               4
         CRN 79-10-7
          CMF C3 H4 O2
 но_ _ Сн__ сн__
    382156-65-2 HCAPLUS
RN
CN
     2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl
     2\hbox{-methyl-}2\hbox{-propenoate phosphate and}\\
    \alpha-(2-methyl-1-oxo-2-propenyl)-\omega-methoxypoly(oxy-1,2-
     ethanediyl), graft, sodium salt (9CI) (CA INDEX NAME)
    CM
        1
     CRN 382156-64-1
     CMF (C6 H10 O3 . C4 H6 O2 . (C2 H4 O)n C5 H8 O2 . x H3 O4 P)x
    CCI PMS
```

$$_{\text{Me}} = \overset{\text{CH2}}{\underset{\text{CO}_2\text{H}}{\text{H}}}$$

```
RN 382156-79-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl
2-methyl-2-propenoate phosphate and oxirane, methyl ether, graft,
sodium salt (9CI) (CA INDEX NAME)
```

```
CM 1
    CRN 67-56-1
CMF C H4 O
нзс_он
    CM 2
    CRN 382156-78-7
    CMF (C6 H10 O3 . C4 H6 O2 . C2 H4 O . x H3 O4 P)x
               3
         CM
         CRN 79-41-4
         CMF C4 H6 O2
СН2
Ме_Ц_СО2Н
         CM 4
         CRN 75-21-8
         CMF C2 H4 O
\overset{\circ}{ }
         CM 5
         CRN 52628-03-2
          CMF C6 H10 O3 . \times H3 O4 P
               CM 6
               CRN 7664-38-2
CMF H3 O4 P
```

CM 7
CRN 868-77-9

CMF C6 H10 O3

RN 382162-06-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid, oxirane and 2-propenoic acid, methyl ether, graft, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 67-56-1 CMF C H4 O

Н3С\_ОН

CM 2

CM 3

CRN 15214-89-8 CMF C7 H13 N O4 S

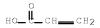
CM 4

CRN 79-41-4 CMF C4 H6 O2

CM 5

CRN 79-10-7

CMF C3 H4 O2



CM 6

CRN 75-21-8 CMF C2 H4 O

 $\stackrel{\circ}{ }$ 

RN 382162-09-6 HCAPLUS

CN Butanedioic acid, methylene-, polymer with 2-methyl-2-propenoic acid, oxirane and 2-propenoic acid, methyl ether, graft, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 67-56-1 CMF C H4 O

H3C\_OH

CM 2

CRN 382162-08-5

CMF (C5 H6 O4 . C4 H6 O2 . C3 H4 O2 . C2 H4 O)  $\mathtt{x}$ 

CCI PMS

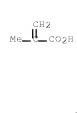
CM 3

CRN 97-65-4 CMF C5 H6 O4

сн<sub>2</sub> но<sub>2</sub>с\_**Е**\_сн<sub>2</sub>\_со<sub>2</sub>н

CM 4

CRN 79-41-4 CMF C4 H6 O2



CM 5 CRN 79-10-7

CMF C3 H4 O2

о но\_**!**\_Сн\_\_Сн<sub>2</sub>

CM 6

CRN 75-21-8 CMF C2 H4 O



RN 382162-29-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), oxirane and 2-propenoic acid, methyl ether, graft, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 67-56-1 CMF C H4 O

Н3С\_ОН

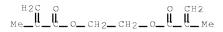
CM 2

CRN 382162-28-9 CMF (C10 H14 O4 . C4 H6 O2 . C3 H4 O2 . C2 H4 O)x

CCI PMS

CM 3

CRN 97-90-5 CMF C10 H14 O4



```
CM
            CRN 79-41-4
            CMF C4 H6 O2
     CH2
 Me_U_CO2H
            СМ
                  5
            CRN 79-10-7
            CMF C3 H4 O2
            CM
                  6
            CRN 75-21-8
            CMF C2 H4 O
 \overset{\circ}{\hookrightarrow}
RN
     382162-32-5 HCAPLUS
      2-Propenoic acid, 2-methyl-, polymer with oxirane and 2-propenoic acid, methyl ether, graft, potassium salt (CA INDEX NAME)
CN
      CM
          1
      CRN 67-56-1
      CMF C H4 O
 H3C_OH
      CM 2
      CRN 159106-91-9
     CMF (C4 H6 O2 . C3 H4 O2 . C2 H4 O)x CCI PMS
            CM
                  3
            CRN 79-41-4
            CMF C4 H6 O2
```

```
CM
          CRN 79-10-7
          CMF C3 H4 O2
 но_Ŭ_сн__сн<sub>2</sub>
                5
          CM
          CRN 75-21-8
          CMF C2 H4 O
 \stackrel{\circ}{\hookrightarrow}
     382162-56-3 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, polymer with oxirane and 2-propenoic
СИ
     acid, methyl ether, graft, compd. with
     2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)
     CM 1
     CRN 102-71-6
     CMF C6 H15 N O3
              CH2-CH2-OH
 HO_CH2_CH2_N_CH2_CH2_OH
     CM 2
     CRN 381164-42-7
     CMF (C4 H6 O2 . C3 H4 O2 . C2 H4 O) \times . \times C H4 O
                3
          CM
          CRN 67-56-1
          CMF C H4 O
 нзс_он
          CM
              4
          CRN 159106-91-9
          CMF (C4 H6 O2 . C3 H4 O2 . C2 H4 O)x
          CCI PMS
```

```
CM
                         5
                   CRN 79-41-4
                   CMF C4 H6 O2
     CH2
 Me_U_CO2H
                   CM 6
                   CRN 79-10-7
                   CMF C3 H4 O2
 но___Сн___сн__
                       7
                   CM
                   CRN 75-21-8
                   CMF C2 H4 O
 \overset{\circ}{\hookrightarrow}
RN
      382162-58-5 HCAPLUS
      2{\rm -Propenoic} acid, 2{\rm -methyl-}, polymer with oxirane and 2{\rm -propenoic} acid, methyl ether, graft, lithium salt (9CI) (CA INDEX NAME)
      CM
           1
      CRN 67-56-1
      CMF C H4 O
 Н3С_ОН
      CM 2
      CRN 159106-91-9
      CMF (C4 H6 O2 . C3 H4 O2 . C2 H4 O) x
      CCI PMS
            CM
                   3
            CRN 79-41-4
            CMF C4 H6 O2
```

CRN 79-41-4 CMF C4 H6 O2

```
CM
          CRN 79-10-7
          CMF C3 H4 O2
 но_Й_сн_сн2
          CM
                5
          CRN 75-21-8
          CMF C2 H4 O
 \stackrel{\circ}{\hookrightarrow}
     382162-65-4 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, polymer with oxirane and 2-propenoic
СИ
     acid, methyl ether, graft, magnesium sodium salt (9CI) (CA INDEX
     NAME)
     CM
     CRN 67-56-1
     CMF C H4 O
 нзс-он
     CM 2
     CRN 159106-91-9
     CMF (C4 H6 O2 . C3 H4 O2 . C2 H4 O) x
     CCI PMS
          CM
                3
          CRN 79-41-4
CMF C4 H6 O2
    CH2
 ме_Ü_со<sub>2</sub>н
                4
          CM
          CRN 79-10-7
```

CMF C3 H4 O2

```
но_ €_ сн_ сн₂
```

CM 5

CRN 75-21-8

CMF C2 H4 0

 $^{\circ}$ 

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TC
     ICM B01F017-52
     ICS D21H019-58; D21H019-60; C09K007-02; D21H017-43; C08F220-00;
          C08F222-00; C09C003-04; B01F017-00; C09D007-02
     46-4 (Surface Active Agents and Detergents)
     Section cross-reference(s): 37, 42, 43, 51
ST
     dispersing agent mineral material water unsatd
     polyoxyalkylene ether copolymer; drilling mud polymeric
     dispersing agent; plastic compn polymeric
     dispersing agent; paint waterborne polymeric
     dispersing agent; paper coating waterborne polymeric
     dispersing agent; itaconate monoester copolymer
     dispersing agent mineral material water; maleate monoester
     copolymer dispersing agent mineral material water;
     methacrylic acid copolymer dispersing agent mineral
    material water; acrylic acid copolymer dispersing agent
    mineral material water
    Chalk
ΙT
     RL: PEP (Physical, engineering or chemical process); PYP (Physical
     process); PROC (Process)
        (Etiquette Violette; use of weakly anionic copolymers as
        dispersing and/or grinding aid agent of aqueous
        suspensions of mineral materials)
ΙT
     Kaolin, processes
     RL: PEP (Physical, engineering or chemical process); PYP (Physical
     process); PROC (Process)
        (SPS; use of weakly anionic copolymers as dispersing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials)
TТ
     Polyoxyalkylenes, uses
     RL: NUU (Other use, unclassified); USES (Uses)
        (acrylic, graft, anionic; use of weakly anionic copolymers as
        dispensing and/or grinding aid agent of aqueous
        suspensions of mineral materials)
     Plastics, miscellaneous
     RL: MSC (Miscellaneous)
        (thermoplastics; use of weakly anionic copolymers as
        dispersing and/or grinding aid agent of aqueous
        suspensions of mineral materials for thermoplastic
        molding compns.)
ΙT
     Plastics, miscellaneous
     RL: MSC (Miscellaneous)
        (thermosetting; use of weakly anionic copolymers as
        dispersing and/or grinding aid agent of aqueous
        suspensions of mineral materials for thermosetting
        molding compns.)
ΤТ
     Polyesters, uses
```

```
RL: POF (Polymer in formulation); USES (Uses)
        (unsatd.; use of weakly anionic copolymers as
        dispersing and/or grinding aid agent of aqueous
        suspensions of mineral materials for thermosetting
        polymer molding compns.)
ΤТ
    Dispersing agents
     Fillers
     Pigments, nonbiological
        (use of weakly anionic copolymers as dispersing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials)
ΙT
     Ionomers
     RL: NUU (Other use, unclassified); USES (Uses)
        (use of weakly anionic copolymers as dispersing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials)
TT
    Limestone, processes
     Marble
     RL: PEP (Physical, engineering or chemical process); PYP (Physical
     process); PROC (Process)
        (use of weakly anionic copolymers as dispersing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials)
ΙT
     Drilling fluids
        (use of weakly anionic copolymers as dispersing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials for drilling muds)
ΙT
     Paper
        (use of weakly anionic copolymers as dispensing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials for paper coatings)
IΤ
        (water-thinned; use of weakly anionic copolymers as
        dispersing and/or grinding aid agent of aqueous
        suspensions of mineral materials for paints)
TΤ
     Coating materials
        (water-thinned; use of weakly anionic copolymers as
        dispersing and/or grinding aid agent of aqueous
        suspensions of mineral materials for paper coatings)
     471-34-1, Calcium carbonate, uses
     RL: MOA (Modifier or additive use); PEP (Physical, engineering or
     chemical process); PYP (Physical process); PROC (Process); USES
     (Uses)
        (DP 800G, Socal P 3; use of weakly anionic copolymers as
        dispersing and/or grinding aid agent of aqueous
        suspensions of mineral materials)
     9003-07-0, Appryl 3120MN1
     RL: POF (Polymer in formulation); USES (Uses)
        (PPH 310MN1; use of weakly anionic copolymers as
        dispersing and/or grinding aid agent of aqueous
        suspensions of mineral materials for thermoplastic
        polymer molding compns.)
     13463-67-7, Titanox RHD 2, processes
     RL: PEP (Physical, engineering or chemical process); PYP (Physical
     process); PROC (Process)
        (RHD 2; use of weakly anionic copolymers as dispersing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials)
     9003-55-8D, carboxylated
TT
     RL: POF (Polymer in formulation); TEM (Technical or engineered
     material use); USES (Uses)
        (coatings; use of weakly anionic copolymers as
        dispersing and/or grinding aid agent of aqueous
        suspensions of mineral materials for paper coatings)
     25767-47-9, Rhodopas DS 910
IT
     RL: POF (Polymer in formulation); TEM (Technical or engineered
     material use); USES (Uses)
```

```
(paints; use of weakly anionic copolymers as dispersing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials for paints)
     9004-74-4D, Polyethylene glycol monomethyl ether,
     methacrylurethane derivs., graft polymers with ethylene glycol
     methacrylate phosphate, Et acrylate, and acrylic acid, sodium
            221881-27-2 221882-30-0
     256511-28-1 291536-34-0 381164-42-7
     381686-32-4 381686-34-6 381686-35-7
     381686-36-8 381686-38-0 381686-40-4
     381686-42-6 381686-44-8 381686-45-9
     381686-46-0 381686-47-1 381686-48-2
     381686-49-3 381686-50-6 381686-51-7
     382156-63-0 382156-65-2 382156-79-8
     382162-06-3 382162-09-6 382162-29-0 382162-30-3 382162-31-4 382162-32-5 382162-40-5 382162-56-3 382162-58-5 382162-59-6 382162-62-1 382162-65-4
     RL: NUU (Other use, unclassified); USES (Uses)
        (use of weakly anionic copolymers as dispersing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials)
     1309-42-8, Magnesium hydroxide 16389-88-1, Dolomite, processes
ΙT
     RL: PEP (Physical, engineering or chemical process); PYP (Physical
     process); PROC (Process)
        (use of weakly anionic copolymers as dispersing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials)
     207973-61-3 314065-74-2
IΤ
     RL: MOA (Modifier or additive use); TEM (Technical or engineered
     material use); USES (Uses)
        (use of weakly anionic copolymers as dispensing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials for paper coatings)
     519154-57-5, DL 950
ΤТ
     RL: POF (Polymer in formulation); TEM (Technical or engineered
     material use); USES (Uses)
        (use of weakly anionic copolymers as dispersing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials for thermosetting molding compns.)
TT
     382600-66-0, Palapreg P 18
     RL: POF (Polymer in formulation); USES (Uses)
        (use of weakly anionic copolymers as dispersing
        and/or grinding aid agent of aqueous suspensions of
        mineral materials for thermosetting polymer molding compns.)
                                THERE ARE 14 CAPLUS RECORDS THAT CITE
OS.CITING REF COUNT:
                         14
                                THIS RECORD (14 CITINGS)
REFERENCE COUNT:
                                THERE ARE 7 CITED REFERENCES AVAILABLE
                                FOR THIS RECORD. ALL CITATIONS AVAILABLE
                                IN THE RE FORMAT
L83 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:
                         2001:220337 HCAPLUS Full-text
DOCUMENT NUMBER:
                          134:253943
TITLE:
                          Interlayer bonding improvers for paper with
                          low impact in the cost of manufacture and on
                          sludge treatment plant
INVENTOR(S):
                         Matsuoka, Hideomi; Obokata, Takao; Kono, Koji;
                          Hirasawa, Takahito
PATENT ASSIGNEE(S):
                         Nippon P.M.C. K. K., Japan
SOURCE:
                          Jpn. Kokai Tokkyo Koho, 19 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:
                          Patient
LANGUAGE:
                          Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
```

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001081697	A	20010327	JP 2000-211007	
				2000
			<	0712
PRIORITY APPLN. INFO.:			JP 1999-198354 A	
				1999
			<i>(</i>	0713

ED Entered STN: 28 Mar 2001

The agents are obtained from the water-soluble polysaccharides containing alginic acid and acrylamide based polymers as reaction products or mixts. Thus, adding ULV 20 (Na alginate) 14.79 to a mixture of water 699.89, 50% aqueous solution of acrylamide 221.79, 76% aqueous solution of acryloyloxyethyldimethylbenzylammonium chloride 29.15, 1% N,N-methylenebisacrylamide aqueous solution 6.33 and 5% Na methallylsulfonate aqueous solution 9.87, combining with 5% ammonium persulfate aqueous solution 3.75 parts and heating at 80° for 2 h gave a solution for improving paper interlayer bonding strength.

IT 331466-26-3P, Acrylamide-

acryloyloxyethyldimethylbenzylammonium chloride-itaconic acid-methylenebisacrylamide-sodium methallylsulfonate copolymer RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (interlayer bonding improvers for paper with low impact in cost of manufacture and on sludge treatment plant)

RN 331466-26-3 HCAPLUS

CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with N,N'-methylenebis[2-propenamide], methylenebutanedioic acid, 2-propenamide and sodium 2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 46830-22-2 CMF C14 H20 N O2 . Cl

$$\begin{array}{c} \text{Me} \\ \text{Ph\_CH2} \underline{\stackrel{\text{N+}}{\stackrel{\text{+}}{\text{CH2}}}} \text{CH2\_CH2\_O} \underline{\stackrel{\text{O}}{\stackrel{\text{-}}{\text{-}}}} \text{CH}\underline{\underline{\text{-}}} \text{CH2} \\ \text{Me} \end{array}$$

● C1-

CM 2

CRN 1561-92-8 CMF C4 H8 O3 S . Na

Na

CM 3 CRN 110-26-9 CMF C7 H10 N2 O2 <u>U\_\_ NH\_\_ CH2\_\_ NH\_\_ U\_\_ CH=</u> СМ 4 CRN 97-65-4 CMF C5 H6 O4 CH2 но2с\_€\_сн2\_со2н CM5 CRN 79-06-1 CMF C3 H5 N O ICM D21H021-18 IC ICS C08F002-44; C08F251-00; D21H017-30; D21H017-37; D21H027-00 43-7 (Cellulose, Lignin, Paper, and Other Wood Products) 331466-25-2P, Acrylamide-acryloyloxyethyldimethylbenzylammonium chloride-methylenebisacrylamide-sodium methallylsulfonate copolymer 331466-26-39, Acrylamide-acryloyloxyethyldimethylbenzylammonium chloride-itaconic acid-methylenebisacrylamide-sodium methallylsulfonate copolymer 331466-27-4P, Acrylamide-acryloyloxyethyldimethylbenzylammonium chloride-sodium methallylsulfonate copolymer RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (interlayer bonding improvers for paper with 1ow impact in cost of manufacture and on sludge treatment plant) OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS) L83 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN 2001:207952 HCAPLUS Full-text ACCESSION NUMBER: 134:239306 DOCUMENT NUMBER: TITLE: Wax compositions for aqueous applications INVENTOR(S): Heinrichs, Franz-Leo PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany Eur. Pat. Appl., 8 pp. SOURCE:

CODEN: EPXXDW

DOCUMENT TYPE: Patent
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA 	TENT NO.	KIND	DATE	APPLICATION NO.	DATE
	1085054	A2	20010321	EP 2000-117405	2000 0811
				<	0011
EP	1085054	A3	20030502		
	R: AT, BE, CH, MC, PT, IE,			GB, GR, IT, LI, LU, NL, RO	SE,
DE	19942962	A1	20010628	DE 1999-19942962	
					1999 0909
				<	
DE	19942962	В4	20041223		
JP	2001106918	A	20010417	JP 2000-242135	
					2000 0810
				<	
CN	1288025	A	20010321	CN 2000-126941	
					2000 0908
		_		<	
US	6391189	B1	20020521	US 2000-658308	2000 0908
				<	0,00
PRIORIT	Y APPLN. INFO.:			DE 1999-19942962 A	
					1999 0909
				<	

ED Entered STN: 22 Mar 2001

AB The title compns., which contain no %20-sciuble emulsifiers or permanent soaps and give aqueous pastes forming H20-resistant, nontacky, elastic films on leather, contain ester, acid, and alc. components of specified composition 10-80% each. A mixture of trimethylolpropane complex ester 45.4, montan wax acids 27.3, and wax alc. (Unilline 425) 27.3% was mixed (22 parts) with paraffin wax 10, diethylenetriamine 1, N-methylglucamine 2, and H20 165 parts to give a suitable composition

IT 97~65~4D, Itaconic acid, complex esters
111~42~2D, Diethanolamine, complex esters

RL: TEM (Technical or engineered material use); USES (Uses)

(wax compns. for aqueous applications)

RN 97-65-4 HCAPLUS

CN Butanedioic acid, 2-methylene- (CA INDEX NAME)

$$\begin{array}{c} \mathtt{ch_2} \\ \mathtt{ho_2c} = \biguplus \mathtt{ch_2} \mathtt{co_2h} \end{array}$$

RN 111-42-2 HCAPLUS

CN Ethanol, 2,2'-iminobis- (CA INDEX NAME)

 $\texttt{HO\_\_CH2\_CH2}\_\texttt{CH2}\_\texttt{NH}\_\texttt{CH2}\_\texttt{CH2}\_\texttt{OH}$ 

T.C. ICM C08L091-06 ICS C08L091-08 45-3 (Industrial Organic Chemicals, Leather, Fats, and Waxes) CC 50-70-4D, Sorbitol, complex esters 77-92-9D, Citric acid, complex esters 77-99-6D, Trimethylolpropane, complex esters 87-69-4D, Tartaric acid, complex esters, uses 88-99-3D, Phthalic acid, complex esters 97-65-4D, Itaconic acid, complex esters 100-21-0D, Terephthalic acid, complex esters 110-16-7D, Maleic acid, complex esters 111-20-6D, Sebacic acid, complex esters 111-42-20, Diethanolamine, complex esters 115-77-5D, Pentaerythritol, complex esters 124-04-9D, Adipic acid, complex esters 693-23-2D, Dodecanedioic acid, complex esters 6284-40-8, N-Methylglucamine 6915-15-7D, Malic acid, complex esters 59113-36-9D, Diglycerol, complex esters 118058-39-2, Uniline 425 RL: TEM (Technical or engineered material use); USES (Uses) (wax compns. for aqueous applications) REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT L83 ANSWER 15 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 2001:101050 HCAPLUS Full-text DOCUMENT NUMBER: 134:164625 TITLE: Recording method comprising printing recording medium with two liquid components INVENTOR(S): Kubota, Kazuhide; Oyanagi, Takashi; Miyabayashi, Toshiyuki PATENT ASSIGNEE(S): Seiko Epson Corp., Japan SOURCE: PCT Int. Appl., 137 pp. CODEN: PIXXD2 DOCUMENT TYPE: Patent LANGUAGE: Japanese FAMILY ACC. NUM. COUNT: 3 PATENT INFORMATION: PATENT NO. KIND DATE APPLICATION NO. DATE PATENT NO. WO 2001008895 A1 20010208 WO 2000-JP5150 2000 0731 <--W: JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE EP 1125760 A1 20010822 EP 2000-949945 2000 0731 <--20060517 EP 1125760 В1 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY JP 3622910 В2 20050223 JP 2001-513596 2000 0731 <--AT 326354 Т 20060615 AT 2000-949945 2000 0731 US 20030069329 A1 20030410 US 2002-56231 2002 0125

В2

20060509

US 7040747

PRIORITY APPLN. INFO.:

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JP 1999-217296

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			1999 0730
JP	< 2000-7135	A	2000 0114
JP	< 2000-211821	А	2000
JP	< 2000-222966	А	2000
JP	< 2000-224002	А	2000
JP	< 2000-224141	A	0725
WO	< 2000-JP5150	W	2000 0725
WO	<	VV	2000 0731
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US	< 2001-806273	A2	2001 0328
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ED Entered STN: 09 Feb 2001

Title recording method for providing a good image with excellent adhesion to a AB recording medium and friction-resistance comprises printing by using an ink composition comprising a colorant, resin emulsion particles, a water-soluble organic solvent and water, and a reacting liquid comprising a reactant producing a coagulation upon contacting with the above ink composition to adhere to a recording medium, wherein the method comprises the steps of making the reacting liquid to adhere to the recording medium, then attaching the ink composition to the medium to print an image, and washing the recording medium printed with a polar solvent. Thus an ink composition comprising (1) a reacting liquid containing  $Mg(NO3)2 \cdot 6H2O$ , triethylene glycol Bu monoether, glycerin, and ion exchanged water, (2) a black ink composition containing carbon black MA 7, styrene-acrylic acid copolymer, styrene-2-ethylhexyl acrylate-methacrylic acid copolymer-sodium dodecylbenzenesulfonate and ion exchanged water, and (3) a color ink set containing cyan, magenta, and yellow inks was prepared for printing test, showing good image quality and good adhesion to medium after washing and heating.

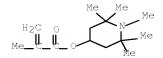
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```
acid-styrene copolymer ammonium salt
                                            324576-08-19,
     Acrylamide-butyl acrylate-methacrylic
     acid-styrene-2,2,3,3-tetrafluoropropyl methacrylate copolymer
                    324576-10-5P, Acrylamide-butyl
     ammonium salt
     acrylate-glycidyl methacrylate-methacrylic
     acid-perfluorooctylethyl methacrylate-styrene copolymer ammonium
            324576-13-8P, Acrylamide-ethylene glycol
     dimethacrylate-methacrylic acid-methyl
     methacrylate-styrene-trifluoroethyl methacrylate copolymer
                   324576-16-19, Butyl
     ammonium salt
     acrylate-methacryloyldiacetylmethane-methacrylic acid-styrene
     copolymer ammonium salt
                              324576-18-32,
     2-Acetoacetoxyethyl methacrylate-acrylamide-lauryl
     methacrylate-methacrylic acid-styrene copolymer ammonium salt
     324576-21-89, 2-Acetoacetoxyethyl
     methacrylate-acrylamide-butyl acrylate-ethylene glycol
     dimethacrylate-methacrylic acid-styrene copolymer ammonium salt
     324576-27-4P, 2-Acetoacetoxyethyl
     methacrylate-acrylamide-butyl acrylate-methacrylic acid-styrene
                             324576-29-69, Acrylamide-butyl
     copolymer ammonium salt
     acrylate-diethyl methacryloylmalonate-glycidyl
     methacrylate-methacrylic acid-styrene copolymer ammonium salt
     RL: IMF (Industrial manufacture); POF (Polymer in formulation);
     PRP (Properties); TEM (Technical or engineered material use); PREP
     (Preparation); USES (Uses)
        (emulsion, ink containing; preparation and properties of
       printing ink composition with two liquid components)
     324575-78-2 HCAPLUS
RN
CN
     2-Propenoic acid, 2-methyl-, polymer with
     2-[3-(2H-benzotriazol-2-yl)-4-hydroxyphenyl]ethyl
     2-methyl-2-propenoate, butyl 2-propenoate, ethenylbenzene,
     oxiranylmethyl 2-methyl-2-propenoate,
     1,2,2,6,6-pentamethyl-4-piperidinyl 2-methyl-2-propenoate and
     2-propenamide, ammonium salt (9CI) (CA INDEX NAME)
     CM
     CRN 324575-77-1
         (C18 H17 N3 O3 . C14 H25 N O2 . C8 H8 . C7 H12 O2 . C7 H10 O3
          . C4 H6 O2 . C3 H5 N O) x
     CCI PMS
               2
         CM
          CRN 96478-09-0
          CMF C18 H17 N3 O3
```

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & \\ & & \\ &$$

CM 3

CRN 68548-08-3 CMF C14 H25 N O2



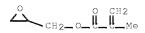
CM 4

CRN 141-32-2 CMF C7 H12 O2



CM 5

CRN 106-91-2 CMF C7 H10 O3



CM 6

CRN 100-42-5 CMF C8 H8

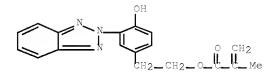
CM 7

CRN 79-41-4 CMF C4 H6 O2

CM 8

CRN 79-06-1 CMF C3 H5 N O

```
324575-82-8 HCAPLUS
RN
CN
     2-Propenoic acid, 2-methyl-, polymer with
     2-[3-(2H-benzotriazol-2-y1)-4-hydroxypheny1]ethy1
     2-methyl-2-propenoate, butyl 2-propenoate, 1,2-ethanediyl
     \verb|bis(2-methyl-2-propenoate)|, \verb| ethenylbenzene|, oxiranylmethyl|
     2-methyl-2-propenoate, 1,2,2,6,6-pentamethyl-4-piperidinyl 2-methyl-2-propenoate, 2-propenamide and 2-sulfoethyl
     2-methyl-2-propenoate sodium salt, ammonium salt (9CI) (CA INDEX
     NAME)
     CM
     CRN 324575-81-7
          (C18 H17 N3 O3 . C14 H25 N O2 . C10 H14 O4 . C8 H8 . C7 H12
           O2 . C7 H10 O3 . C6 H10 O5 S . C4 H6 O2 . C3 H5 N O . Na) \mathbf{x}
     CCI PMS
           СМ
                 2
           CRN 96478-09-0
           CMF C18 H17 N3 O3
```



CM 3

CRN 68548-08-3

CMF C14 H25 N O2

CM 4

CRN 1804-87-1 CMF C6 H10 O5 S . Na

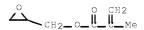
Na

CM 5

CRN 141-32-2 CMF C7 H12 O2

CM 6

CRN 106-91-2 CMF C7 H10 O3



CM 7

CRN 100-42-5 CMF C8 H8

CM 8

CRN 97-90-5 CMF C10 H14 O4

CM 9

CRN 79-41-4 CMF C4 H6 O2

CM 10 CRN 79-06-1

CMF C3 H5 N O

H2N\_UCH\_CH2

RN 324575-89-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, ethenylbenzene, 1,6-hexanediyl bis(2-methyl-2-propenoate) and 2-hydroxyethyl 2-propenoate, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 324575-88-4

CMF (C14 H22 O4 . C8 H8 . C7 H12 O2 . C5 H8 O3 . C4 H6 O2)x

CCI PMS

CM 2

CRN 6606-59-3

CMF C14 H22 O4



CM 3
CRN 818-61-1

CMF C5 H8 O3

HO\_CH2\_CH2\_O\_U\_CH\_\_CH2

CM 4

CRN 141-32-2

CMF C7 H12 O2

H2C\_\_\_\_CH\_\_Ph

CRN 100-42-5 CMF C8 H8

```
CM
             CRN 79-41-4
             CMF C4 H6 O2
     CH2
 Me_U_CO2H
                    5
             CM
             CRN 79-06-1
             CMF C3 H5 N O
 _{\text{H}_2\text{N}} \overset{\circ}{\mathbb{L}} _{\text{CH}} _{\text{CH}_2}
RN
      324575-93-1 HCAPLUS
CN
      2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate,
      1,1'-(1,2-ethanediyl) bis(2-methyl-2-propenoate), ethenylbenzene
      and 2-methyl-2-propenoic acid, ammonium salt (CA INDEX NAME)
      CM
            1
      CRN 324575-92-0 CMF (C10 H14 O4 . C8 H8 . C7 H12 O2 . C4 H6 O2 . C3 H5 N O)x
      CCI PMS
                    2
             CM
             CRN 141-32-2
             CMF C7 H12 O2
 _{\text{n-BuO}} = \overset{\text{O}}{\underset{\text{ch}}{\blacksquare}} \text{ch} = \text{ch}_2
             CM
                    3
             CRN 100-42-5
             CMF C8 H8
 H2C____CH__Ph
```

CRN 97-90-5 CMF C10 H14 O4

CM 5

CRN 79-41-4 CMF C4 H6 O2

$$_{\text{Me}} = \bigcup_{-\text{CO}_2\text{H}}^{\text{CH}_2}$$

CM 6

CRN 79-06-1 CMF C3 H5 N O

RN 324575-95-3 HCAPLUS

2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, 1,2-ethanediyl bis(2-methyl-2-propenoate), ethenylbenzene and 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid, ammonium salt (9CI) (CA INDEX NAME)

CM :

CRN 324575-94-2

CMF (C10 H14 O4 . C8 H8 . C7 H13 N O4 S . C7 H12 O2 . C4 H6 O2) x

CCI PMS

CM 2

CRN 15214-89-8 CMF C7 H13 N O4 S

CRN 141-32-2 CMF C7 H12 O2

CM 4

CRN 100-42-5 CMF C8 H8

H2C\_\_\_\_CH\_\_Ph

CM 5

CRN 97-90-5 CMF C10 H14 O4

CM 6

CRN 79-41-4 CMF C4 H6 O2

RN 324575-97-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, ethenylbenzene, oxydi-2,1-ethanediyl bis(2-methyl-2-propenoate) and 2-propenamide, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 324575-96-4

CMF (C12 H18 O5 . C8 H8 . C7 H12 O2 . C4 H6 O2 . C3 H5 N O) x

CCI PMS

CM 2

CRN 2358-84-1 CMF C12 H18 O5

CM 3

CRN 141-32-2 CMF C7 H12 O2

CM 4

CRN 100-42-5 CMF C8 H8

CM 5

CRN 79-41-4 CMF C4 H6 O2

CM 6

CRN 79-06-1 CMF C3 H5 N O

RN 324575-98-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, ethenylbenzene, oxiranylmethyl 2-methyl-2-propenoate and 2-propenamide, ammonium salt (9CI) (CA INDEX NAME)

CRN 
$$75266-11-4$$
 CMF (C8 H8 . C7 H12 O2 . C7 H10 O3 . C4 H6 O2 . C3 H5 N O)x CCI PMS

CM 2

CRN 141-32-2 CMF C7 H12 O2

CM 3

CRN 106-91-2 CMF C7 H10 O3

$$\overset{\circ}{\longleftarrow}_{\text{CH}_2-\text{O}} \overset{\circ}{\underset{\mathbb{L}}{\parallel}} \overset{\text{CH}_2}{\underset{\text{Me}}{\parallel}}_{\text{Me}}$$

CM 4

CRN 100-42-5 CMF C8 H8

CM 5

CRN 79-41-4 CMF C4 H6 O2

$$_{\text{Me}}$$

CM 6

CRN 79-06-1 CMF C3 H5 N O

```
324576-00-3 HCAPLUS
CN
     2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate,
     ethenylbenzene and trifluoroethyl 2-methyl-2-propenoate, ammonium
     salt (9CI) (CA INDEX NAME)
     CM 1
     CRN 324575-99-7
     CMF (C8 H8 . C7 H12 O2 . C6 H7 F3 O2 . C4 H6 O2)x
     CCI PMS
          CM
                2
          CRN 38785-10-3
          CMF C6 H7 F3 O2
CCI IDS
 H2C O
Me_U_U_OEt
  3 (D1_F)
          CM
              3
          CRN 141-32-2
          CMF C7 H12 O2
 n-Buo____CH___CH2
          CM
          CRN 100-42-5
          CMF C8 H8
 H_2C \longrightarrow CH \longrightarrow Ph
          CM
          CRN 79-41-4
          CMF C4 H6 O2
 СH2
Me_Ц_СО2Н
```

```
324576-03-6 HCAPLUS
     2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, 1,2-ethanediyl bis(2-methyl-2-propenoate), ethenylbenzene,
CN
      3, 3, 4, 4, 5, 5, 6, 6, 7, 7, 8, 8, 9, 9, 10, 10, 10-heptadecafluorodecyl
      2-methyl-2-propenoate and 2-propenamide, ammonium salt (9CI) (CA
      INDEX NAME)
     CM
          1
      CRN 324576-02-5
      \mbox{CMF} (C14 H9 F17 O2 . C10 H14 O4 . C8 H8 . C7 H12 O2 . C4 H6 O2 .
           C3 H5 N O)x
     CCI PMS
           CM
                  2
            CRN 1996-88-9
           CMF C14 H9 F17 O2
                             O CH2
 F_3C_-(CF_2)_7_-CH_2_-CH_2_O_-\widetilde{U}_-\widetilde{U}_-^{nz}Me
                  3
           CM
           CRN 141-32-2
            CMF C7 H12 O2
 n-BuO____CH___CH2
            CM
                  4
           CRN 100-42-5
           CMF C8 H8
 H_2C \longrightarrow CH \longrightarrow Ph
            CM
                  5
           CRN 97-90-5
           CMF C10 H14 O4
```

$$_{\text{Me}} \underline{\overset{\text{CH2}}{\mu}}_{\text{CO2H}}$$

324576-10-5 HCAPLUS RN CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, ethenylbenzene, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10- $\verb|heptadecafluorodecyl| 2-methyl-2-propenoate, oxiranylmethyl|$ 2-methyl-2-propenoate and 2-propenamide, ammonium salt (9CI) (CA INDEX NAME) CM1 CRN 324576-09-2 CMF (C14 H9 F17 O2 . C8 H8 . C7 H12 O2 . C7 H10 O3 . C4 H6 O2 . C3 H5 N O)x CCI PMS CM2 CRN 1996-88-9 CMF C14 H9 F17 O2

$$\overset{\circ}{\longleftarrow}_{\text{CH}_2-\text{O}} \overset{\circ}{\text{U}} \overset{\text{CH}_2}{\text{U}}_{\text{Me}}$$

$$H_2C$$
  $\longrightarrow$   $CH$   $\longrightarrow$   $Ph$ 

- RN 324576-13-8 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), ethenylbenzene, methyl 2-methyl-2-propenoate, 2-propenamide and trifluoroethyl

2-methyl-2-propenoate, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 324576-12-7

CMF (C10 H14 O4 . C8 H8 . C6 H7 F3 O2 . C5 H8 O2 . C4 H6 O2 . C3 H5 N O)x

CCI PMS

CM 2

CRN 38785-10-3

CMF C6 H7 F3 O2

CCI IDS

3 (D1\_F)

CM 3

CRN 100-42-5 CMF C8 H8

H 2 C\_\_\_\_\_ C H\_\_ Ph

CM 4

CRN 97-90-5 CMF C10 H14 O4

CM 5

CRN 80-62-6 CMF C5 H8 O2

$$\begin{array}{c} {}^{\text{H2C}} \circ \\ {}^{\text{Me}} = \underbrace{\overset{\circ}{\mathbf{U}}}_{}^{\text{OMe}} \end{array}$$

CRN 79-06-1 CMF C3 H5 N O

324576-16-1 HCAPLUS RN

CN 2-Propenoic acid, 2-methyl-, polymer with 1-acetyl-2-oxopropyl 2-methyl-2-propenoate, butyl 2-propenoate and ethenylbenzene, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 324576-15-0

CMF (C9 H12 O4 . C8 H8 . C7 H12 O2 . C4 H6 O2)x CCI PMS

CM 2

CRN 129955-71-1 CMF C9 H12 O4

CRN 141-32-2

CMF C7 H12 O2

CRN 100-42-5 CMF C8 H8 H 2 C\_\_\_\_ C H\_\_ P h 5 CMCRN 79-41-4 CMF C4 H6 O2 CH2 Me\_U\_CO2H RN 324576-18-3 HCAPLUS Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with dodecyl 2-methyl-2-propenoate, ethenylbenzene, 2-methyl-2-propenoic acid and 2-propenamide, ammonium salt (9CI) (CA INDEX NAME) CM 1 (C16 H30 O2 . C10 H14 O5 . C8 H8 . C4 H6 O2 . C3 H5 N O)  $\mathbf x$ CMF CCI PMS CM 2 CRN 21282-97-3 CMF C10 H14 O5 3 CMCRN 142-90-5 CMF C16 H30 O2 O CH2  $Me = (CH<sub>2</sub>)<sub>11</sub> = 0 = \underbrace{\tilde{\mathbf{U}}}_{-} \underbrace{\tilde{\mathbf{U}}}_{-}^{n2} Me$ 

CMF C8 H8

```
H2C____CH__Ph
         CM
              5
         CRN 79-41-4
         CMF C4 H6 O2
    CH2
 Me_U_CO2H
         CM
              6
         CRN 79-06-1
         CMF C3 H5 N O
 H2N_U_CH_CH2
    324576-21-8 HCAPLUS
RN
    Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl
CN
    ester, polymer with butyl 2-propenoate, 1,2-ethanediyl
    bis(2-methyl-2-propenoate), ethenylbenzene, 2-methyl-2-propenoic
    acid and 2-propenamide, ammonium salt (9CI) (CA INDEX NAME)
    CM
    CRN 324576-20-7
         (C10 H14 O5 . C10 H14 O4 . C8 H8 . C7 H12 O2 . C4 H6 O2 . C3
         H5 N O)x
    CCI PMS
         CM
              2
         CRN 21282-97-3
         CMF C10 H14 O5
 3
         CM
```

CRN 141-32-2 CMF C7 H12 O2

Page 142

CM 4

CRN 100-42-5 CMF C8 H8

H2C\_\_\_\_CH\_\_Ph

CM 5

CRN 97-90-5 CMF C10 H14 O4

CM 6

CRN 79-41-4 CMF C4 H6 O2

CM 7

CRN 79-06-1 CMF C3 H5 N O

RN 324576-27-4 HCAPLUS

CN Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-methyl-2-propenoic acid and 2-propenamide, ammonium salt (9CI) (CA INDEX NAME)

CRN 
$$324576-26-3$$
 CMF (C10 H14 O5 . C8 H8 . C7 H12 O2 . C4 H6 O2 . C3 H5 N O)x CCI PMS

CM 2

CRN 21282-97-3 CMF C10 H14 O5

CM 3

CRN 141-32-2 CMF C7 H12 O2

$$_{\text{n-BuO}}$$
 CH CH2

CM 4

CRN 100-42-5 CMF C8 H8

CM 5

CRN 79-41-4 CMF C4 H6 O2

CM 6

CRN 79-06-1 CMF C3 H5 N O

324576-29-6 HCAPLUS Propanedioic acid, (2-methyl-1-oxo-2-propenyl)-, diethyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-methyl-2-propenoic acid, oxiranylmethyl 2-methyl-2-propenoate and 2-propenamide, ammonium salt (9CI) (CA INDEX NAME) CM CRN 324576-28-5 CMF (C11 H16 O5 . C8 H8 . C7 H12 O2 . C7 H10 O3 . C4 H6 O2 . C3 CCI PMS CM2 CRN 4180-09-0 CMF C11 H16 O5 CM 3 CRN 141-32-2 CMF C7 H12 O2 п-вио\_Ё\_сн\_\_сн2 CM4 CRN 106-91-2 CMF C7 H10 O3

$$\overset{\circ}{\longleftarrow}_{\text{CH}_2\_\circ\_} \overset{\circ}{\underset{}{\mathbb{U}}} \overset{\text{CH}_2}{\underset{}{\mathbb{U}}_{\text{Me}}}$$

CM 5

CRN 100-42-5

CMF C8 H8

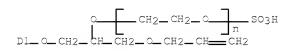
H2C\_\_\_\_CH\_\_Ph

```
CM
               6
          CRN 79-41-4
          CMF C4 H6 O2
    CH2
 Me_U_CO2H
          СМ
          CRN 79-06-1
          CMF C3 H5 N O
 H2N_U_CH_CH2
ΙT
     97-65-4D, Itaconic acid, esters, polymers with styrene
     RL: TEM (Technical or engineered material use); USES (Uses)
        (ink containing; preparation and properties of printing ink composition with
        two liquid components)
     97-65-4 HCAPLUS
RN
CN
     Butanedioic acid, 2-methylene- (CA INDEX NAME)
      CH2
 HO2C_U_CH2_CO2H
ΙT
     324575-84-09 324575-85-19
     324737-84-09, Butyl methacrylate-ethylene
     oxide-methacrylic acid-phenoxyethyl methacrylate graft copolymer
     ammonium sulfate 324737-86-29, Benzyl
     methacrylate-butyl methacrylate-dicyclopentanyl
     dimethacrylate-ethylene oxide-methacrylic acid graft copolymer
     ammonium sulfate
     RL: IMF (Industrial manufacture); POF (Polymer in formulation);
     TEM (Technical or engineered material use); PREP (Preparation);
     USES (Uses)
        (pigment dispersion; preparation and properties of
        printing ink composition with two liquid components)
RN
     324575-84-0 HCAPLUS
     2-Propenoic acid, 2-methyl-, polymer with butyl
     2-methyl-2-propenoate, 2-phenoxyethyl 2-methyl-2-propenoate and
     \alpha-sulfo-\omega-[1-[(nonylphenoxy)methyl]-2-(2-
     propenyloxy)ethoxy]poly(oxy-1,2-ethanediyl) ammonium salt, graft
     (9CI) (CA INDEX NAME)
     CM 1
     CRN 113405-85-9
     CMF (C2 H4 O)n C21 H34 O6 S . H3 N
```

CCI IDS, PMS



D1- (CH2)8-Me



● NH3

CM 2

CRN 10595-06-9 CMF C12 H14 O3

CM 3

CRN 97-88-1 CMF C8 H14 O2

CM 4

CRN 79-41-4 CMF C4 H6 O2

RN 324575-85-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate, phenylmethyl 2-methyl-2-propenoate and  $\alpha$ -sulfo- $\omega$ -[1-[(nonylphenoxy)methyl]-2-(2-propenyloxy)ethoxy]poly(oxy-1,2-ethanediyl) ammonium salt, graft

(9CI) (CA INDEX NAME)

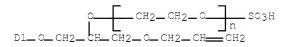
CM 1

CRN 113405-85-9 CMF (C2 H4 O)n C21 H34 O6 S . H3 N

CCI IDS, PMS



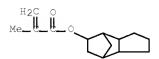
D1- (CH2)8-Me



● NH3

CM 2

CRN 34759-34-7 CMF C14 H20 O2



CM 3

CRN 2495-37-6 CMF C11 H12 O2

CM 4

CRN 97-88-1 CMF C8 H14 O2

```
CM 5
     CRN 79-41-4
     CMF C4 H6 O2
    CH2
 Me_U_CO2H
    324737-84-0 HCAPLUS
RN
CN
    2-Propenoic acid, 2-methyl-, polymer with butyl
     \hbox{2-methyl-2-propenoate, oxirane and $2$-phenoxyethyl}
     2-methyl-2-propenoate, hydrogen sulfate, graft, ammonium salt
     (9CI) (CA INDEX NAME)
     CM
        1
     CRN 7664-93-9
     CMF H2 O4 S
     CM 2
    CRN 324737-83-9
CMF (C12 H14 O3
         (C12 H14 O3 . C8 H14 O2 . C4 H6 O2 . C2 H4 O) x
     CCI PMS
         CM
               3
          CRN 10595-06-9
          CMF C12 H14 O3
 CM
               4
         CRN 97-88-1
          CMF C8 H14 O2
 n-BuO_______M____Me
```

```
5
          CM
          CRN 79-41-4
          CMF C4 H6 O2
    CH2
 Me_U_CO2H
          СМ
                6
          CRN 75-21-8
          CMF C2 H4 O
 \stackrel{\circ}{\hookrightarrow}
     324737-86-2 HCAPLUS
RN
CN
     2-Propenoic acid, 2-methyl-, polymer with butyl
     2-methyl-2-propenoate, octahydro-4,7-methano-1H-indene-5,?-diyl
     \verb|bis(2-methyl-2-propenoate)|, oxirane and phenylmethyl|
     2-methyl-2-propenoate, hydrogen sulfate, graft, ammonium salt
     (9CI) (CA INDEX NAME)
     CM
          1
     CRN 7664-93-9
     CMF H2 O4 S
     CM 2
     CRN 326926-42-5
     CMF (C18 H24 O4 . C11 H12 O2 . C8 H14 O2 . C4 H6 O2 . C2 H4 O) x
     CCI PMS
                3
          CM
          CRN 107293-48-1
          CMF C18 H24 O4
          CCI IDS
```

CM 4

CRN 2495-37-6 CMF C11 H12 O2

CM 5

CRN 97-88-1 CMF C8 H14 O2

CM 6

CRN 79-41-4 CMF C4 H6 O2

CM 7

CRN 75-21-8 CMF C2 H4 O

# $\overset{\circ}{\bigtriangleup}$

IC ICM B41M005-00 ICS B41J003-04; C09D011-00

```
42-12 (Coatings, Inks, and Related Products)
CC
     Section cross-reference(s): 73
     Dispersing agents
       Dispersion (of materials)
       Emulsifying agents
       Emulsions
     Light stabilizers
     Pigments, nonbiological
     Surfactants
     UV stabilizers
        (ink containing; preparation and properties of printing ink composition with
        two liquid components)
     25085-34-1, Acrylic acid-styrene copolymer
                                                   35209-54-2, Acrylic
     acid-styrene copolymer ammonium salt
     RL: POF (Polymer in formulation); TEM (Technical or engineered
     material use); USES (Uses)
        (dispersing agent, ink containing; preparation and properties
        of printing ink composition with two liquid components)
ΙT
     25155-30-0, Sodium dodecylbenzenesulfonate
     RL: NUU (Other use, unclassified); USES (Uses)
        (emulsifier, ink containing; preparation and properties of
        printing ink composition with two liquid components)
ΙT
     151-21-3, Sodium laurylsulfate, uses
     RL: NUU (Other use, unclassified); USES (Uses)
        (emulsifier; preparation and properties of printing ink
        composition with two liquid components)
     26636-08-8P, 2-Ethylhexyl acrylate-methacrylic acid-styrene
ΤТ
     copolymer 232935-02-3P, Acrylamide-acrylic acid-ADK Stab LA
     82-butyl acrylate-RUVA 93-styrene copolymer ammonium salt
     324575-78-28 324575-80-6P 324575-82-88 324575-89-59, Butyl acrylate-2-hydroxyethyl
     acrylate-1,6-hexanediol dimethacrylate-methacrylic acid-styrene
     copolymer ammonium salt
                                324575-91-92,
     Acrylamide-lauryl methacrylate-methacrylic acid-styrene copolymer
                    324575~93~%P, Acrylamide-butyl
     ammonium salt
     acrylate-ethylene glycol dimethacrylate-methacrylic acid-styrene
     copolymer ammonium salt
                               324575-95-39
     324575-97-5P, Acrylamide-butyl acrylate-diethylene glycol
     dimethacrylate-methacrylic acid-styrene copolymer ammonium salt
     324575-98-69, Acrylamide-butyl acrylate-glycidyl
     methacrylate-methacrylic acid-styrene copolymer ammonium salt
     324576-00-39, Butyl acrylate-methacrylic
     acid-styrene-trifluoroethyl methacrylate copolymer ammonium salt
     324576~03~6P, Acrylamide-butyl acrylate-ethylene glycol
     dimethacrylate-heptadecafluorodecyl methacrylate-methacrylic
     acid-styrene copolymer ammonium salt 324576-06-9P,
     2-Acryloylamino-2-methylpropanesulfonic acid-butyl
     acrylate-diethylene glycol
     dimethacrylate-2,2,3,4,4,4-hexafluorobutyl methacrylate-styrene
     copolymer ammonium salt 324576-98-19, Acrylamide-butyl
     acrylate-methacrylic acid-styrene-2, 2, 3, 3-tetrafluoropropyl
     methacrylate copolymer ammonium salt 324576-10-59,
     Acrylamide-butyl acrylate-glycidyl methacrylate-methacrylic
     acid-perfluorooctylethyl methacrylate-styrene copolymer ammonium
            324576-13-8P, Acrylamide-ethylene glycol
     dimethacrylate-methacrylic acid-methyl
     \hbox{\tt methacrylate-styrene-trifluoroethyl $\stackrel{-}{\mathtt{methacrylate}}$ $\operatorname{\textbf{copolymer}}$ }
                    324576-16-19, Butyl
     ammonium salt
     acrylate-methacryloyldiacetylmethane-methacrylic acid-styrene
     copolymer ammonium salt
                               324576-18-3P,
     2-Acetoacetoxyethyl methacrylate-acrylamide-lauryl
     methacrylate-methacrylic acid-styrene copolymer ammonium salt
     324576-21-89, 2-Acetoacetoxyethyl
     methacrylate-acrylamide-butyl acrylate-ethylene glycol
     dimethacrylate-methacrylic acid-styrene copolymer ammonium salt
     324576-24-1P
                    324576-27-4P, 2-Acetoacetoxyethyl
```

```
methacrylate-acrylamide-butyl acrylate-methacrylic acid-styrene
     copolymer ammonium salt 324576-29-69, Acrylamide-butyl
     acrylate-diethyl methacryloylmalonate-glycidyl
    methacrylate-methacrylic acid-styrene copolymer ammonium salt
    RL: IMF (Industrial manufacture); POF (Polymer in formulation);
    PRP (Properties); TEM (Technical or engineered material use); PREP
     (Preparation); USES (Uses)
        (emulsion, ink containing; preparation and properties of
       printing ink composition with two liquid components)
    79-41-4D, Methacrylic acid, esters, polymers 97-65-4D,
    Itaconic acid, esters, polymers with styrene 100-42-5D, Styrene,
    polymers with (meth)acrylates 9002-88-4, Polyethylene
     9003-07-0, Polypropylene 9003-20-7, Poly(vinyl acetate)
     9003-53-6, Polystyrene 9010-86-0, Ethyl acrylate-ethylene
     copolymer 24937-78-8, Ethylene-vinyl acetate copolymer
     25300-64-5, Maleic acid-styrene copolymer
    RL: TEM (Technical or engineered material use); USES (Uses)
        (ink containing; preparation and properties of printing ink composition with
       two liquid components)
    324575-83-9P 324575-84-0P
                                 324575-85-19
TТ
     324575-86-2P 324575-87-3P 324737-82-8P, Acrylonitrile-ethylene
    oxide graft copolymer, ammonium sulfate 324737-84-0P,
    Butyl methacrylate-ethylene oxide-methacrylic acid-phenoxyethyl
    methacrylate graft copolymer ammonium sulfate
    324737-86-29, Benzyl methacrylate-butyl
    methacrylate-dicyclopentanyl dimethacrylate-ethylene
    oxide-methacrylic acid graft copolymer ammonium sulfate
     324737-88-4P, 2-Acrylamido-2-methylpropanesulfonic
    acid-acrylonitrile-benzyl methacrylate-butyl methacrylate-ethylene
    oxide graft copolymer ammonium sulfate 324737-90-8P,
    Acrylonitrile-dibutyl fumarate-ethylene oxide graft copolymer
    ammonium sulfate
    RL: IMF (Industrial manufacture); POF (Polymer in formulation);
    TEM (Technical or engineered material use); PREP (Preparation);
    USES (Uses)
        (pigment dispersion; preparation and properties of
       printing ink composition with two liquid components)
OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE
                             THIS RECORD (8 CITINGS)
REFERENCE COUNT:
                           THERE ARE 31 CITED REFERENCES AVAILABLE
                             FOR THIS RECORD. ALL CITATIONS AVAILABLE
                             IN THE RE FORMAT
L83 ANSWER 16 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:107083 HCAPLUS Full-text
DOCUMENT NUMBER:
                       132:153520
TITLE:
                       Paper sizing agent and paper coated with the
INVENTOR(S):
                       Yokotani, Kenji; Torigoe, Noriaki
PATENT ASSIGNEE(S):
                       Arakawa Chemical Industries, Ltd., Japan
                       Jpn. Kokai Tokkyo Koho, 8 pp.
SOURCE:
                       CODEN: JKXXAF
DOCUMENT TYPE:
                       Patent
LANGUAGE:
                        Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
    PATENT NO. KIND DATE APPLICATION NO.
                                                               DATE
                       ----
     -----
                                          _____
    JP 2000045196 A 20000215 JP 1998-228696
                                                                1998
                                                                0728
                                             <--
                       B2
                              20080910
    JP 4147630
PRIORITY APPLN. INFO.:
                                         JP 1998-228696
```

1998

0728

<--Entered STN: 15 Feb 2000 AΒ The agent comprises (1) paper sizing agent, (2) the carboxyl-containing polyacrylamide and (3) water-sol . Al compound (Al sulfate). Thus, a sizing agent was prepared by emulsion polymerization styrene 45, Bu acrylate 10, methacrylic acid 45% in H20 containing K persulfate and neutralization with 28% NH3. 58479-10-09, Butyl acrylate-methacrylic acid-styrene ΙT copolymer ammonium salt 219687-26-0P RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (paper sizing agent and paper coated with the same) 58479-10-0 HCAPLUS RN2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and CN ethenylbenzene, ammonium salt (CA INDEX NAME) CM1 CRN 25036-16-2 (C8 H8 . C7 H12 O2 . C4 H6 O2)x CCI PMS 2 CMCRN 141-32-2 CMF C7 H12 O2 n-Buo\_U\_CH\_CH2 3 CM CRN 100-42-5 CMF C8 H8 H 2 C\_\_\_\_ C H\_\_ Ph CM 4 CRN 79-41-4 CMF C4 H6 O2 Me\_U\_CO2H 219687-26-0 HCAPLUS RN Butanedioic acid, 2-methylene-, polymer with 2-propenamide and sodium 2-methyl-2-propene-1-sulfonate (1:1) (CA INDEX NAME)

CM 1

CRN 1561-92-8 CMF C4 H8 O3 S . Na

$$\begin{array}{c} \text{CH2} \\ \text{Me} & \begin{array}{c} \text{CH2} \\ \text{CH2} & \text{SO3H} \end{array} \end{array}$$

Na Na

2 CM

CRN 97-65-4 CMF C5 H6 O4

СМ 3

CRN 79-06-1 CMF C3 H5 N O

TC ICM D21H019-20

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products) Section cross-reference(s): 42

ΙT Polymerization

(emulsion; paper sizing agent and paper coated with

9003-06-9P, Acrylamide-acrylic acid copolymer 26022-09-3P, Maleic anhydride-styrene copolymer ammonium salt 26590-08-9P, Diisobutylene-maleic anhydride copolymer ammonium salt 58479-10-0P, Butyl acrylate-methacrylic acid-styrene copolymer ammonium salt 149935-58-0P 219687-26-0P RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation);

(paper sizing agent and paper coated with the same)

L83 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN 2000:105287 HCAPLUS Full-text ACCESSION NUMBER:

DOCUMENT NUMBER: 132:139004

TITLE: Water-based polyacrylamide-type coatings and

coated papers thereof

INVENTOR(S): Yokotani, Kenji; Torikoshi, Noriaki PATENT ASSIGNEE(S): Arakawa Chemical Industries, Ltd., Japan SOURCE:

Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

Patent DOCUMENT TYPE:

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000045197	A	20000215	JP 1998-228697	
				1998 0728
			<	0726
JP 4147631	В2	20080910		
PRIORITY APPLN. INFO.:			JP 1998-228697	
				1998
				0728
			<	

ED Entered STN: 15 Feb 2000

The coatings comprise solns. containing surface sizing agents, polyacrylamides bearing CO2H, starches, water soluble Al compds., and chelating agents. Thus, 20 parts of a 3%-solid solution of 45:10:45 styrene-Bu acrylate-methacrylic acid copolymer ammonium salt and 40 parts of a 3%-solid solution of 94.9:5.1 acrylamide-acrylic acid copolymer Na salt were mixed with 3.6 parts of a 3% Al2(SO4)3 solution and 1000 parts of a 10% solution of an oxidized starch (Oji Ace A) then diluted to 2.5% to give a coating. Raw papers for newspapers were coated with the coating, dried at 100°, and kept at 20° and 65% RH for a day to give test pieces having min. naps after printing, low solubility of the coating in water, and good sizing property.

IT 58479-10-0P, Butyl acrylate-methacrylic acid-styrene

copolymer ammonium salt

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(water-based polyacrylamide-type coatings for coated papers)

RN 58479-10-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and ethenylbenzene, ammonium salt (CA INDEX NAME)

CM 1

CRN 25036-16-2

CMF (C8 H8 . C7 H12 O2 . C4 H6 O2)x

CCI PMS

CM 2

CRN 141-32-2 CMF C7 H12 O2



CM 3

CRN 100-42-5 CMF C8 H8

H2C\_\_\_CH\_Ph

CM 4 CRN 79-41-4 CMF C4 H6 O2 CH2 Me\_U\_CO2H ΙT 257277-33-19 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (water-based polyacrylamide-type coatings for coated papers) RN 257277-33-1 HCAPLUS Butanedioic acid, 2-methylene-, polymer with 2-propenamide and sodium 2-methyl-2-propene-1-sulfonate (1:1), sodium salt (CA INDEX NAME) CM 1 CRN 219687-26-0 (C5 H6 O4 . C4 H8 O3 S . C3 H5 N O . Na)x CCI PMS CM2 CRN 1561-92-8 CMF C4 H8 O3 S . Na CH<sub>2</sub> Me\_\_\_CH2\_\_SO3H Na Na CM3 CRN 97-65-4 CMF C5 H6 O4 CH2 но2с\_\_\_\_\_сн2\_\_со2н СМ 4 CRN 79-06-1 CMF C3 H5 N O

```
ICM D21H019-20
     ICS D21H019-10; D21H019-12
     43\text{--}7 (Cellulose, Lignin, Paper, and Other Wood Products)
CC
     Section cross-reference(s): 42
ΤТ
    26022-10-6P $8479-10-0P, Butyl acrylate-methacrylic
     acid-styrene copolymer ammonium salt 257282-32-9P
     RL: IMF (Industrial manufacture); MOA (Modifier or additive use);
     PREP (Preparation); USES (Uses)
        (water-based polyacrylamide-type coatings for coated papers)
     25987-30-8P, Acrylamide-acrylic acid copolymer sodium salt
ΙT
     149935-58-0P 257277-33-1P
     RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
     or engineered material use); PREP (Preparation); USES (Uses)
        (water-based polyacrylamide-type coatings for coated papers)
L83 ANSWER 18 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:60032 HCAPLUS Full-text
DOCUMENT NUMBER:
                        132:109529
TITLE:
                       Water-based recording liquids and ink-jet
                       recording process thereof
INVENTOR(S):
                       Miyabayashi, Toshiyuki; Yatake, Masahiro
PATENT ASSIGNEE(S):
                      Seiko Epson Corp., Japan
SOURCE:
                       Jpn. Kokai Tokkyo Koho, 11 pp.
                        CODEN: JKXXAF
DOCUMENT TYPE:
                       Patent
LANGUAGE:
                        Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
     PATENT NO. KIND DATE APPLICATION NO.
     PATENT NO.
                                                                DATE
                               -----
                                           -----
     _____
     JP 2000026779 A 20000125 JP 1998-192131
                                                                 1998
                                                                 0707
                                             <--
PRIORITY APPLN. INFO.:
                                           JP 1998-192131
                                                                 1998
                                                                 0707
                                              <--
    Entered STN: 26 Jan 2000
ED
     The liqs. contain pigments or disperse dyes, water, water-soluble organic solvents, and
     optionally surfactants and/or glycol ethers, polymer fine particles, and alkaline
     agents and have storage modulus in 0.01-10~\mathrm{Hz}~1+10-1~\mathrm{Pz} in dynamic viscoelastic
     determination at strain 1.0 and \zeta potential at pH 6.5-11.5 \leq-20 mV. The liquid show
     excellent pigment dispersion stability and storage stability. Thus, an ink-jet ink
     contained carbon black (MA 7) 6, styrene-acrylic acid copolymer 1, glycerin 20, NaOH
     0.1%, and balance water.
     79-41-40, Methacrylic acid, esters, polymers
     97-65-4D, Itaconic acid, esters, polymer with styrene
     102-71-6, Triethanolamine, uses 111-42-2,
     Diethanolamine, uses 141-43-5, Monoethanolamine, uses
     26007-37-4, Itaconic acid-styrene copolymer
     RL: TEM (Technical or engineered material use); USES (Uses)
        (in water-based ink-jet inks with good pigment
       dispersion stability and storage stability)
RN
     79-41-4 HCAPLUS
     2-Propenoic acid, 2-methyl- (CA INDEX NAME)
```

CH2 Me\_U\_CO2H

```
RN 97-65-4 HCAPLUS
   Butanedioic acid, 2-methylene- (CA INDEX NAME)
CN
     CH2
но2С_СН2_СО2Н
RN 102-71-6 HCAPLUS
CN Ethanol, 2,2',2''-nitrilotris- (CA INDEX NAME)
            СН2-СН2-ОН
 но_сн2_сн2_ N_сн2_сн2_он
RN 111-42-2 HCAPLUS
CN Ethanol, 2,2'-iminobis- (CA INDEX NAME)
HO__CH2__CH2__NH__CH2__CH2__OH
RN 141-43-5 HCAPLUS
CN Ethanol, 2-amino- (CA INDEX NAME)
H 2 N _ CH 2 _ CH 2 _ OH
   26007-37-4 HCAPLUS
RN
    Butanedioic acid, 2-methylene-, polymer with ethenylbenzene (CA
CN
    INDEX NAME)
    CM 1
    CRN 100-42-5
    CMF C8 H8
 H2C____CH__Ph
    CM 2
    CRN 97-65-4
    CMF C5 H6 O4
```

```
CH2
HO2C_U_CH2_CO2H
```

```
ICM C09D011-02
TC
    ICS B41J002-01; B41M005-00
CC
    42-12 (Coatings, Inks, and Related Products)
ΙT
    Surfactants
        (amphoteric; in water-based ink-jet inks with good pigment
        dispersion stability and storage stability)
IΤ
        (anionic; in water-based ink-jet inks with good pigment
       dispersion stability and storage stability)
TT
    Polyamides, uses
    Polyesters, uses
     Polysiloxanes, uses
     Polyurethanes, uses
     RL: TEM (Technical or engineered material use); USES (Uses)
        (in water-based ink-jet inks with good pigment
       dispersion stability and storage stability)
ΤТ
    Inks
        (jet-printing, water-thinned; water-based ink-jet inks with
        good pigment dispersion stability and storage
        stability)
     Surfactants
ΙT
        (nonionic; in water-based ink-jet inks with good pigment
        dispersion stability and storage stability)
     74-85-1D, Ethylene, polymer with (meth)acrylic acid ester
IΤ
     75-50-3, Trimethylamine, uses 79-10-7D, Acrylic acid, esters,
    polymers 79-41-40, Methacrylic acid, esters, polymers
     97-65-40, Itaconic acid, esters, polymer with styrene
     100-37-8, Diethyl ethanolamine 100-42-5D, Styrene, polymer with
     (meth) acrylic acid ester 102-71-6, Triethanolamine,
          102-79-4, Butyl diethanolamine 108-01-0, Dimethyl
     ethanolamine 109-83-1, Monomethyl ethanolamine 110-16-7D,
    Maleic acid, esters, polymer with styrene 131-42-2,
    Diethanolamine, uses 112-34-5, Diethylene glycol monobutyl ether
    112-59-4, Diethylene glycol monohexylether 121-44-8,
    Triethylamine, uses 122-20-3, Triisopropanolamine 126-86-3,
     Surfynol 104 141-43-5, Monoethanolamine, uses
    143-22-6, Triethylene glycol monobutyl ether 585-88-6, Maltitol
    1310-58-3, Potassium hydroxide, uses 1310-65-2, Lithium
    hydroxide 1310-73-2, Sodium hydroxide, uses 6168-72-5
     7664-41-7, Ammonia, uses 9003-17-2, Polybutadiene 9003-20-7,
    Poly(vinyl acetate) 9003-31-0, Polyisoprene
                                                   9003-53-6,
    Polystyrene 9003-55-8, Styrene-butadiene copolymer 14002-34-7,
    Tripropanol amine 18912-81-7, Diethylene glycol monopentyl ether
     24937-78-8, Ethylene-vinyl acetate copolymer
                                                  25014-31-7, Poly
                       25085-34-1, Styrene-acrylic acid
     (α-methylstyrene)
     copolymer 25300-64-5, Styrene-maleic acid copolymer
     25961-89-1, Triethylene glycol monohexylether
    Triethylene glycol monopentyl ether
                                         26007-37-4,
     Itaconic acid-styrene copolymer 29387-86-8, Propylene glycol
    monobutyl ether 35884-42-5, Dipropylene glycol monobutyl ether
     85305-25-5, Dipropanol amine 197530-05-5 228263-99-8
     228264-01-5 228264-03-7 228264-05-9
                                             228264-09-3
                 228264-83-3 228264-84-4 255393-50-1, Joncryl 352
     228264-11-7
                                              228264-85-5
     228264-86-6
     RL: TEM (Technical or engineered material use); USES (Uses)
        (in water-based ink-jet inks with good pigment
        dispersion stability and storage stability)
                              THERE ARE 1 CAPLUS RECORDS THAT CITE
OS.CITING REF COUNT:
                        1
                              THIS RECORD (1 CITINGS)
```

L83 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 1999:380802 HCAPLUS Full-text DOCUMENT NUMBER: 131:20212

TITLE: Improving shape stability of cellulosic fiber

cloth

INVENTOR(S):
Nakaoka, Yoshihiko

PATENT ASSIGNEE(S): Takemoto Oil and Fat Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Satent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11158773	A	19990615	JP 1997-343880	
				1997
				1127
			<	
PRIORITY APPLN. INFO.:			JP 1997-343880	
				1997
				1127
			<	

ED Entered STN: 21 Jun 1999

AB Improving shape stability of cellulosic fiber cloth with no formaldehyde occurring comprises treatment of the cloth with a water-soluble vinyl polymer crosslinking agent and an inorg. salt. Thus, acrylic acid 360, 2-hydroxyethyl methacrylate 45, sodium methallylsulfonate 45 parts were polymerized to give a water-soluble polymer, 70 parts of which was mixed with 30 parts of sodium phosphate to treat cotton knit fabric, showing shrinkage <3%, good creaseproofing, , softening and color change resistance.

IT 226218-85-59, Ammonium methacrylate-2-hydroxyethyl methacrylate-sodium methallylsulfonate copolymer 226218-86-69, Acrylic acid-2-hydroxyethyl methacrylate-itaconic acid Triethanolamine salt-sodium methallylsulfonate copolymer 226218-87-79, Acrylic

acid-2-hydroxyethyl methacrylate-ammonium methacrylate-sodium methallylsulfonate copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(improving shape stability of cellulosic fiber cloth)

RN 226218-85-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with ammonium 2-methyl-2-propenoate and sodium

2-methyl-2-propene-l-sulfonate (9CI) (CA INDEX NAME)

 ${\tt CM} \quad 1$ 

CRN 16325-47-6 CMF C4 H6 O2 . H3 N



● NH3

CM 2

CRN 1561-92-8

CMF C4 H8 O3 S . Na

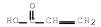
CRN 1561-92-8 CMF C4 H8 O3 S . Na

Na

CM 3

CRN 79-10-7

CMF C3 H4 O2



CM 2

CRN 1561-92-8 CMF C4 H8 O3 S . Na

CM 4 CRN 61839-16-5 CMF C6 H15 N O3 . C5 H6 O4 5 CM CRN 102-71-6 CMF C6 H15 N O3 CH2-CH2-OH HO\_CH2\_CH2\_N\_CH2\_CH2\_OH CM CRN 97-65-4 CMF C5 H6 O4 CH2 но2с\_€\_сн2\_со2н 226218-87-7 HCAPLUS RN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with ammonium 2-methyl-2-propenoate, 2-propenoic acid and sodium 2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME) CM 1 CRN 16325-47-6 CMF C4 H6 O2 . H3 N CH<sub>2</sub> Me\_[\_\_CO2H ● NH3

```
CH2
 Me_U_CH2_SO3H
      Na
         3
    CM
    CRN 868-77-9
     CMF C6 H10 O3
  H2C
 Me_U_U_O_CH2_CH2_OH
    CM
         4
    CRN 79-10-7
    CMF C3 H4 O2
    _U__CH___CH2
    ICM D06M015-267
IC
    ICS C08F222-06; C08F290-06
     40-9 (Textiles and Fibers)
    165174-72-1P, Acrylic acid-polyethylene glycol methyl ether
    methacrylate-sodium methallylsulfonate copolymer 226218-83-3P,
    Acrylic acid-2-hydroxyethyl methacrylate-sodium methallylsulfonate
    copolymer 226218-85-59, Ammonium
    methacrylate-2-hydroxyethyl methacrylate-sodium methallylsulfonate
    copolymer 226218-86-69, Acrylic acid-2-hydroxyethyl
    methacrylate-itaconic acid Triethanolamine salt-sodium
    methallylsulfonate copolymer 226218-87-79, Acrylic
    acid-2-hydroxyethyl methacrylate-ammonium methacrylate-sodium
    methallylsulfonate copolymer 226218-89-9P, Maleic acid-methyl
    methacrylate-sodium styrenesulfonate copolymer
                                                     226218-90-2P
     226218-91-3P, Acrylic acid-polyethylene glycol phenyl ether
    methacrylate-sodium styrenesulfonate copolymer
    RL: IMF (Industrial manufacture); TEM (Technical or engineered
    material use); PREP (Preparation); USES (Uses)
        (improving shape stability of cellulosic fiber cloth)
OS.CITING REF COUNT:
                              THERE ARE 1 CAPLUS RECORDS THAT CITE
                       1
                              THIS RECORD (1 CITINGS)
L83 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN
```

ACCESSION NUMBER: 1998:115995 HCAPLUS Full-text DOCUMENT NUMBER: 128:218469 ORIGINAL REFERENCE NO.: 128:43265a,43268a TITLE: Aqueous pigmented inks with long storage stability and providing high density printed INVENTOR(S): Sakuma, Tadashi; Ishii, Masuki; Yanagi,

Hideki; Suzuki, Shoichi; Wakabayashi, Shigemi;

Tsujii, Yoshiaki; Aida, Kenji

PATENT ASSIGNEE(S): Kao Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10046083	A	19980217	JP 1996-210263	
				1996
				0808
PRIORITY APPLN. INFO.:			< JP 1996-210263	
FRIORITI AFFIN. INIO			01 1990 210203	1996
				0808

ED Entered STN: 26 Feb 1998

Title inks comprise pigments, polymeric dispersants, water-soluble solvents, and water, where the polymer dispersants have weight-average mol. weight 5000-200000 and are copolymers of 10-50 parts of alkylene oxide adduct monomer CH2:CXCOY [X = H, Me, CH2CO2(R10)nR2, CH2CONR3R4; R1 = C2-3 alkylene; R2 = H, C1-3 alkyl; R3 = (R10)pR2; R4 = (R10)qR2; n, p, q = 1-300; Y = O(R10)nR2, NR3R4] and 50-90 parts of other monomers.

IT 141-43-5, uses 203983-85-1

RL: TEM (Technical or engineered material use); USES (Uses) (aqueous pigmented inks with long storage stability and providing high d. printed image)

RN 141-43-5 HCAPLUS

CN Ethanol, 2-amino- (CA INDEX NAME)

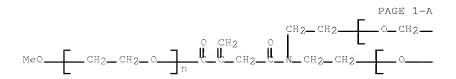
H2N\_CH2\_CH2\_OH

RN 203983-85-1 HCAPLUS

CN Butanedioic acid, methylene-, diammonium salt, polymer with  $\alpha - \text{hydro-}\omega - \text{hydroxypoly}(\text{oxy-1,2-ethanediyl}) \text{ ester ether } \\ \text{with } 4-[\text{bis}(2-\text{hydroxyethyl})\text{amino}]-2-\text{methylene-4-oxobutanoic acid} \\ \text{(3:1) } 1-\text{methyl ether (9CI)} \text{ (CA INDEX NAME)}$ 

CM 1

CRN 203983-84-0 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C10 H17 N O5 CCI PMS



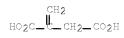
PAGE 1-B

$$-CH_2$$
 OH OH  $-CH_2$   $-CH_2$ 

CM 2

CRN 7580-68-9

CMF C5 H6 O4 . 2 H3 N



●2 NH3

203983-83-9, Itaconic acid-polyethylene glycol ΙT monoacrylate copolymer 204201-55-8, Disodium itaconate-polypropylene glycol monomethyl ether methacrylate copolymer

RL: TEM (Technical or engineered material use); USES (Uses) (polymer dispersant; aqueous pigmented inks with long storage stability and providing high d. printed image)

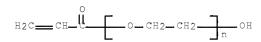
203983-83-9 HCAPLUS RN

CN Butanedioic acid, methylene-, polymer with  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26403-58-7

CMF (C2 H4 O)n C3 H4 O2 CCI PMS



CM 2

CRN 97-65-4 CMF C5 H6 O4

CH2 но2с\_\_\_\_сн2\_\_со2н

```
RN
     204201-55-8 HCAPLUS
     Butanedioic acid, methylene-, disodium salt, polymer with
     \alpha-(2-methyl-1-oxo-2-propenyl)-\omega-methoxypoly[oxy(methyl-
     1,2-ethanediyl)] (9CI) (CA INDEX NAME)
     CM
         1
     CRN 65932-26-5
     CMF
         (C3 H6 O)n C5 H8 O2
     CCI IDS, PMS
 ^{\mathrm{H2C}} ^{\mathrm{O}} ^{\mathrm{Me}} ^{\mathrm{O}} ^{\mathrm{C3H6}} ^{\mathrm{O}} ^{\mathrm{OMe}}
     CM
          2
     CRN 5363-69-9
     CMF C5 H6 O4 . 2 Na
       CH<sub>2</sub>
 но2С_Сн2_Со2Н
      2 Na
     ICM C09D011-00
     ICS C09D011-10
CC
     42-12 (Coatings, Inks, and Related Products)
     ink jet printing aq pigmented; vinyl oxyalkylene adduct polymer
ST
     ink dispersant
     111-46-6, Diethylene glycol, uses 141-43-8, uses
ΙT
     147-14-8, C.I. Pigment Blue 15:1 80083-40-5, C.I. Pigment Red
            203983-85-1
     RL: TEM (Technical or engineered material use); USES (Uses)
        (aqueous pigmented inks with long storage stability and providing
        high d. printed image)
TТ
     203983-83-9, Itaconic acid-polyethylene glycol
     monoacrylate copolymer 204201-55-8, Disodium
     itaconate-polypropylene glycol monomethyl ether methacrylate
     copolymer
     RL: TEM (Technical or engineered material use); USES (Uses)
        (polymer dispersant; aqueous pigmented inks with long
        storage stability and providing high d. printed image)
L83 ANSWER 21 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:
                          1996:629804 HCAPLUS Full-text
DOCUMENT NUMBER:
                          125:250501
ORIGINAL REFERENCE NO.: 125:46793a,46796a
                          Water-based pigment compositions containing
                          acrylic polymer emulsions with good
                          storage stability
INVENTOR(S):
                          Kato, Akimitsu; Kobayashi, Juichi
PATENT ASSIGNEE(S):
                          Pentel Kk, Japan; Pentel Co., Ltd.
SOURCE:
                          Jpn. Kokai Tokkyo Koho, 4 pp.
                          CODEN: JKXXAF
```

DOCUMENT TYPE: %atent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
 JP 08199093	А	19960806	JP 1995-30099	
01 00177073	21	19900000	01 1993 30099	1995
				0126
JP 3702373	В2	20051005	<	
PRIORITY APPLN. INFO.:			JP 1995-30099	
				1995
				0126
			<	

ED Entered STN: 24 Oct 1996

The compns. contain pigments, acrylate ester polymer emulsions, water-soluble solvents with high b. p., condensed naphthalenesulfonate salts, [CH2CR(CO2M)]n (I; R = C1-10 alkyl, n ≥1; M = Na, K, NH4), and H2O as essential components, and useful for water-resistant poster colors or watercolor paintings. A yellow composition containing Hansa Yellow G 10, poly(Et acrylate) emulsion 10, hydroxyethyl cellulose 0.5, glycerin 5, condensed Na naphthalenesulfonate 0.5, I (M = Na, R = Et) 0.5, H2O 33, diethanolamine 0.5, and CaCO3 40 parts showed fluidity (JIS K-5101; 10.1) 52.1 mm initially and 51.0 mm after 10 days at room temperature

IT 182229-44-3 182229-46-5

182229-48-7 182229-50-1

RL: MOA (Modifier or additive use); USES (Uses)
 (water-based pigment compns. with good storage stability
 containing)

RN 182229-44-3 HCAPLUS

CN Butanoic acid, 2-methylene-, sodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 182229-43-2 CMF C5 H8 O2 . Na

 $\mathsf{Et} = \bigcup_{0}^{\mathsf{CH}_2} \mathsf{Co}_2\mathsf{H}$ 

Na Na

RN 182229-46-5 HCAPLUS
CN Pentanoic acid, 2-methylene-, sodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 182229-45-4 CMF C6 H10 O2 . Na

```
CH<sub>2</sub>
 n-Pr_CO2H
     Na
     182229-48-7 HCAPLUS
RN
     Octanoic acid, 2-methylene-, ammonium salt, homopolymer (9CI) (CA
CN
     INDEX NAME)
         1
     CM
     CRN 182229-47-6
     CMF C9 H16 O2 . H3 N
            CH<sub>2</sub>
 Me_ (CH2) 5_ __ CO2H
       ● NH3
     182229-50-1 HCAPLUS
RN
CN
     Octanoic acid, 2-methylene-, potassium salt, homopolymer (9CI)
     (CA INDEX NAME)
     CM
          1
     CRN 182229-49-8
     CMF C9 H16 O2 . K
            CH<sub>2</sub>
 Me_ (CH2) 5___CO2H
        lacksquare \mathbb{K}
     ICM C09D005-06
     ICS C09D017-00; C09D133-02; C09D133-08
     42-6 (Coatings, Inks, and Related Products)
CC
     water based pigment compn storage stability; poster color pigment
     compn storage stability; painting pigment compn water based;
     acrylate ester polymer emulsion pigment compn; polyethyl
     acrylate emulsion pigment compn; naphthalenesulfonate
     salt pigment compn storage stability; gelation prevention water
     based pigment compn
ΙT
     Pigments
        (water-based acrylate polymer {\it emulsions} with good
        storage stability containing)
ΙT
     Emulsions
        (water-based; pigment compns. containing acrylate polymers,
        condensed naphthalenesulfonate salts and
        carboxylate-substituted polymers with good storage stability)
ΙT
     Paintings
```

(watercolor, pigment compns. containing acrylic polymer

emulsions with good storage stability for) ΙT 9003-32-1, Poly(ethyl acrylate) 25852-37-3, Butyl acrylate-methyl methacrylate copolymer 27813-99-6, Butyl methacrylate-ethyl acrylate copolymer RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (amulsions; water-based pigment compns. containing condensed naphthalenesulfonate salts with good storage stability) 2512-29-0, Hansa Yellow G 5281-04-9 57455-37-5, C.I. Pigment ΙT RL: TEM (Technical or engineered material use); USES (Uses) (pigment; water-based acrylate polymer emulsions with good storage stability containing) ΤТ 182229-44-3 182229-46-5 182229-48-7 182229-50-1 RL: MOA (Modifier or additive use); USES (Uses) (water-based pigment compns. with good storage stability containing) ΙT 25155-19-5D, Naphthalenesulfonic acid, condensates, sodium salt RL: MOA (Modifier or additive use); USES (Uses) (water-based pigment compns.; containing acrylate polymer emulsions with good storage stability) L83 ANSWER 22 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 1992:129953 HCAPLUS Full-text DOCUMENT NUMBER: 116:129953 ORIGINAL REFERENCE NO.: 116:22033a,22036a TITLE: Manufacture of water-soluble ester salts of itaconic acid copolymers INVENTOR(S): Wlasiuk, Danuta; Klopotek, Alojzy Instytut Chemii Przemyslowej, Pol. PATENT ASSIGNEE(S): SOURCE: Pol., 11 pp. Abstracted and indexed from the unexamined application. CODEN: POXXA7 DOCUMENT TYPE: Patent LANGUAGE: Polish FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION: KIND DATE PATENT NO. APPLICATION NO. DATE ----\_\_\_\_\_ PL 153127 Bl 19910329 PL 1987-265244 1987 0417 PRIORITY APPLN. INFO.: PL 1987-265244 1987 0417 <--Entered STN: 03 Apr 1992 EDProducts useful as complexing agents and surfactants are manufactured by partially esterifying 1-10:1-3 itaconic acid-maleic anhydride copolymers (I) with 0.01-2.5 mol C10-22 fatty alc., polyethoxylated C10-22 fatty alc. (d.p. 6-20), or polyethoxylated (C6-22-alkyl)phenol at 343-383 K and neutralizing with alkali metal hydroxides, NH3, and or alkanolamines at 293-323 K. Thus, a 130-600 I was heated in dioxane with 6 g polyethoxylated nonylphenol (d.p. 8) and stripped to give 245 g product (mol. Weight 5500) which was neutralized (240 g) with 763 g 20% NaOH at 293 K to give a 38.5% solution of polymer with Ca2+ and Mg2+ complexation 82.9 and 0.9 mg/g at pH 9 and surface tension of a 0.5% aqueous solution 65 dynes/cm. ΤТ 139247-10-2P RL: PREP (Preparation) (manufacture of water soluble, for surfactants and complexing agents)

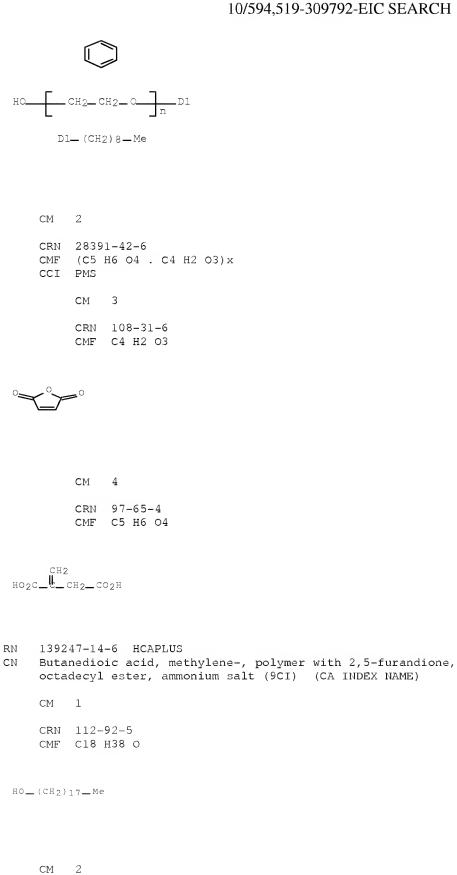
Butanedioic acid, methylene-, polymer with 2,5-furandione, ester

139247-10-2 HCAPLUS

RN

CN

```
with \alpha-dodecyl-\omega-hydroxypoly(oxy-1,2-ethanediyl),
    potassium salt (9CI) (CA INDEX NAME)
    CM
        1
     CRN 9002-92-0
         (C2 H4 O)n C12 H26 O
     CCI PMS
     CH2_CH2_O____n (CH2)11_Me
     CM
          2
    CRN 28391-42-6
    CMF (C5 H6 O4 . C4 H2 O3)\times
    CCI PMS
               3
          CM
         CRN 108-31-6
          CMF C4 H2 O3
          CM
               4
          CRN 97-65-4
          CMF C5 H6 O4
      CH2
 но2с____Сн2__со2н
ΙT
    139247-12-49
                   139247-14-6P
     139604-08-3P 139604-09-4P
     RL: PREP (Preparation)
        (manufacture of water-soluble, for surfactants and
        complexing agents)
    139247-12-4 HCAPLUS
RN
    Butanedioic acid, methylene-, polymer with 2,5-furandione, ester
     with \alpha-(nonylphenyl)-\omega-hydroxypoly(oxy-1,2-
     ethanediyl), sodium salt (9CI) (CA INDEX NAME)
     CM
        1
    CRN 9016-45-9
     CMF (C2 H4 O)n C15 H24 O
    CCI IDS, PMS
```



CRN 28391-42-6

CCI PMS

CMF (C5 H6 O4 . C4 H2 O3)x

CRN 139247-11-3 (C5 H6 O4 . C4 H2 O3) x . x (C2 H4 O)n C18 H38 O CM3 CRN 9005-00-9 CMF (C2 H4 O)n C18 H38 O CCI PMS CH2\_CH2\_O\_\_\_\_ (CH2)17\_Me

CM

```
CRN 28391-42-6
         CMF (C5 H6 O4 . C4 H2 O3)x
         CCI PMS
                   5
              CM
              CRN 108-31-6
              CMF C4 H2 O3
              CM
                   6
              CRN 97-65-4
              CMF C5 H6 O4
      CH2
 но2С_€_Сн2_Со2Н
    139604-09-4 HCAPLUS
RN
    Butanedioic acid, methylene-, polymer with 2,5-furandione, dodecyl
CN
    ester, compd. with 2,2'-iminobis[ethanol] (9CI) (CA INDEX NAME)
    CM
         1
     CRN 111-42-2
    CMF C4 H11 N O2
 HO__CH2__CH2__NH__CH2__CH2__OH
    CM 2
    CRN 139247-13-5
    CMF C12 H26 O . x (C5 H6 O4 . C4 H2 O3)x
             3
         CM
         CRN 112-53-8
         CMF C12 H26 O
 HO_ (CH2)11_Me
         CM
              4
         CRN 28391-42-6
```

CMF (C5 H6 O4 . C4 H2 O3) $\times$ 

CCI PMS

CM

CRN 108-31-6 CMF C4 H2 O3



СМ 6

CRN 97-65-4 CMF C5 H6 O4

CH2 но2С\_\_\_\_Сн2\_\_Со2н

ICM C08F220-04 ICS C08F222-06

CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 46

139247-10-29 ΙT

RL: PREP (Preparation)

(manufacture of water soluble, for surfactants and

complexing agents)

ΙT 139247-12-49 139247-14-69

139604-08-3P 139604-09-4P

RL: PREP (Preparation)

(manufacture of water-soluble, for surfactants and

complexing agents)

L83 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1991:124811 HCAPLUS Full-text

DOCUMENT NUMBER: 114:124811

ORIGINAL REFERENCE NO.: 114:21249a,21252a

TITLE: Decomposition suppressants for basic calcium

carbonate platelets

INVENTOR(S): Nagami, Kyoichi; Saito, Fumikazu; Machida,

Masahiro

PATENT ASSIGNEE(S): Chichibu Lime Industries Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
 JР 02129020	А	19900517	JP 1988-282103	
				1988
				1108
			<	
PRIORITY APPLN. INFO.:			JP 1988-282103	
				1988

1108

<--ED Entered STN: 06 Apr 1991 AΒ The title suppressants for 2CaCO3.xCa(OH)2.yH2O (I, x = 0.5-1.0; y = 0.7-1.5) platelets useful as paper pigments with good ink absorption are water-soluble copolymers (mol. weight 1000-50,000) of 40-99.5 mol% unsatd. carboxylic acid A1A2C:CA3CO2X1 (A1, A2 = H, Me, CO2X2, excluding A1 = A2 = CO2X1; A3 = H, Me, CH2CO2X3; when A3 = CH2X3, A1, A2 = H, Me; X1-3 = H, mono- or divalent metal, NH4, organic amine residue) and 60-0.5 mol% unsatd. (meth)allyl ether CH2CRCH2OCH2CH(OH)CH2Z (R = H, Me; Z = OH, sulfo or salt, phosphoric or phosphorus acid group or salt). Thus, 100 parts I (x = 0.63; y = 0.86)stored in water with 1.6 parts 80:20 acrylic acid-3-allyloxy-2-hydroxypropanesulfonic acid copolymer Na salt (mol. weight 4000) at 80° for 48 h showed decomposition <10%. ΙT 130977-98-9 130978-00-6 RL: USES (Uses) (decomposition suppressants, for basic calcium carbonate) RN 130977-98-9 HCAPLUS CN 2-Propenoic acid, 2-methyl-, polymer with 3-(2-propenyloxy)-1,2-propanediol, ammonium salt (9CI) (CA INDEX NAME) CM 1 CRN 130977-97-8 CMF (C6 H12 O3 . C4 H6 O2)x CCI PMS 2 CMCRN 123-34-2 CMF C6 H12 O3 HO\_CH2\_CH\_CH2\_O\_CH2\_CH\_\_CH2 CM 3 CRN 79-41-4 CMF C4 H6 O2 CH2 Me\_U\_CO2H 130978-00-6 HCAPLUS RN Butanedioic acid, methylene-, polymer with 2-propenoic acid and 3-(2-propenyloxy)-1,2-propanediol, sodium salt (9CI) (CA INDEX NAME) CM1 CRN 130261-95-9 CMF (C6 H12 O3 . C5 H6 O4 . C3 H4 O2)x CCI PMS CM2

> CRN 123-34-2 CMF C6 H12 O3

HO\_CH2\_CH\_CH2\_O\_CH2\_CH\_\_CH2 CM 3 CRN 97-65-4 CMF C5 H6 O4 CH2 но2С\_\_\_Сн2\_\_Со2н CM 4 CRN 79-10-7 CMF C3 H4 O2 HO\_U\_CH\_\_CH2 ICM C01F011-18 ICS C08F216-14; C08F220-04; C09K015-06; C09K015-12 CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products) 104603-74-9 105062-72-4, Acrylic acid-3-allyloxy-2-hydroxypropanesulfonic acid copolymer sodium salt 125938-65-0 125938-67-2 130977-96-7 130977-98-9 130978-02-8 131026-26-1 130978-00-6 RL: USES (Uses) (decomposition suppressants, for basic calcium carbonate) L83 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 1987:90162 HCAPLUS Full-text DOCUMENT NUMBER: 106:90162 ORIGINAL REFERENCE NO.: 106:14699a,14702a Anticoagulant preparation from organic acids TITLE: and amines INVENTOR(S): Murashige, Yoshio; Miyagawa, Chosaku; Kawachi, Yasunofu; Fujimoto, Junko PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp. CODEN: JKXXAF DOCUMENT TYPE: Patent LANGUAGE: Japanese FAMILY ACC. NUM. COUNT: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
 JP 61215325	Α	19860925	JP 1985-56464	
				1985

PATENT INFORMATION:

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0320
                                               <--
PRIORITY APPLN. INFO.:
                                            JP 1985-56464
                                                                    1985
                                                                    0320
                                               <--
ED
     Entered STN: 21 Mar 1987
AΒ
     A water-soluble anticoagulant is prepared by treating a polymerizable organic acid such
     as acrylic acid with an amine in the presence of soluble vinyl monomer like K
     methacrylate. Thus, acrylic acid 7.2, K methacrylate 3.6, K allylsulfonate 3.6 q, and
     12 \text{ mL} H2O were mixed and treated with 5.4 \text{ g} monoethanolamine to give anticoagulant
     copolymer. Fresh blood (1-15 mL) mixed with 0.02 mL containing 15% weight/volume of
     the anticoagulant did not coagulate and did not alter the characteristics of blood
     corpuscles, blood platelets, etc.
ΙT
     106704-53-49
                  106704-54-52
     106704-56-79
                    106704-58-99
     106704-60-3P
                    106704-61-49
     106704-62-5P
                   106704-64-72
     106704-66-99
                    105704-58-19
     106704-70-5P
                  106704-72-79
     106704-74-92
                  106704-76-1P
    105704-78-39
                  106704-80-72
     106704-82-99 106704-83-09
     106705-05-9P 106705-06-0P
     106705-07-19 106705-08-29
     106726-04-99 106726-05-09
     106726-07-29 106726-08-39
     106771-12-49
     RL: THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); USES (Uses)
        (preparation of, as anticoagulant)
     106704-53-4 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, potassium salt, polymer with
     potassium 2-propene-1-sulfonate and 2-propenoic acid, compd. with
     1,3-propanediamine (9CI) (CA INDEX NAME)
     CM
         1
     CRN 109-76-2
     CMF C3 H10 N2
 H2N_CH2_CH2_CH2_NH2
     CM
          2
     CRN 106704-52-3
         (C4 H6 O2 . C3 H6 O3 S . C3 H4 O2 . 2 K)x
     CCI PMS
               3
          CM
          CRN 6900-35-2
          CMF C4 H6 O2 . K
    CH<sub>2</sub>
 Me_C_CO2H
```

● K

```
CM
              4
          CRN 3934-13-2
          CMF C3 H6 O3 S . K
 H2C___CH_CH2_SO3H
        ● K
          CM
               5
          CRN 79-10-7
          CMF C3 H4 O2
 но_ <mark>Ü_</mark> сн__ сн<sub>2</sub>
RN 106704-54-5 HCAPLUS
{\tt CN}-2{\tt -Propenoic} acid, 2-methyl-, potassium salt, polymer with
     potassium 2-propene-1-sulfonate and 2-propenoic acid, compd. with
     2-aminoethanol (9CI) (CA INDEX NAME)
     CM
         1
     CRN 141-43-5
     CMF C2 H7 N O
 H2N_CH2_CH2_OH
     CM 2
     CRN 106704-52-3
     CMF (C4 H6 O2 . C3 H6 O3 S . C3 H4 O2 . 2 K) x
     CCI PMS
          CM
               3
          CRN 6900-35-2
          CMF C4 H6 O2 . K
```

```
CH<sub>2</sub>
 Me_U_CO2H
    K
              4
          CM
          CRN 3934-13-2
          CMF C3 H6 O3 S . K
 H2C___CH__CH2__SO3H
        left \mathbb{K}
          CM
               5
          CRN 79-10-7
          CMF C3 H4 O2
 но_Й_сн_сн2
    106704-56-7 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, polymer with potassium
     2-methyl-2-propenoate and potassium 2-propene-1-sulfonate, compd.
     with 1-butanamine (9CI) (CA INDEX NAME)
     CM
        1
     CRN 109-73-9
     CMF C4 H11 N
 H3C_CH2_CH2_CH2_NH2
     CM
        2
     CRN 106704-57-8
     CMF (C4 H6 O2 . C4 H6 O2 . C3 H6 O3 S . 2 K)x
     CCI PMS
               3
          CM
          CRN 6900-35-2
          CMF C4 H6 O2 . K
```

```
CH<sub>2</sub>
 Me_U_CO2H
    K
          CM
          CRN 3934-13-2
          CMF C3 H6 O3 S . K
 H2C___CH__CH2__SO3H
        K
               5
          CM
          CRN 79-41-4
          CMF C4 H6 O2
 _{\text{Me}}
RN
    106704-58-9 HCAPLUS
    2-Propenoic acid, 2-methyl-, polymer with potassium
     2-methyl-2-propenoate and potassium 2-propene-1-sulfonate, compd.
     with 1,2-ethanediamine (9CI) (CA INDEX NAME)
     CM
        1
     CRN 107-15-3
     CMF C2 H8 N2
 H2N_CH2_CH2_NH2
     CM 2
     CRN 106704-57-8
     CMF (C4 H6 O2 . C4 H6 O2 . C3 H6 O3 S . 2 K)\mathbf{x}
     CCI PMS
          CM
               3
          CRN 6900-35-2
          CMF C4 H6 O2 . K
```

```
CH<sub>2</sub>
 Me_U_CO2H
    ■ K
          CM
              4
          CRN 3934-13-2
          CMF C3 H6 O3 S . K
 H2C___CH__CH2__SO3H
        left \mathbb{K}
                5
          CM
          CRN 79-41-4
          CMF C4 H6 O2
 ме_СН2
Ме_СО2Н
     106704-60-3 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, polymer with potassium
     \hbox{$2-$methyl-2-propenoate and sodium $2-$propene-1-sulfonate, compd.}
     with 1,3-propanediamine (9CI) (CA INDEX NAME)
     CM
         1
     CRN 109-76-2
     CMF C3 H10 N2
 H2N_CH2_CH2_CH2_NH2
     CM
         2
     CRN 106704-59-0
     CMF (C4 H6 O2 . C4 H6 O2 . C3 H6 O3 S . K . Na)x
     CCI PMS
          CM
          CRN 6900-35-2
```

CMF C4 H6 O2 . K

3

CM

```
CH<sub>2</sub>
 Me_U_CO2H
    ● K
          CM
                4
          CRN 2495-39-8
          CMF C3 H6 O3 S . Na
 H2C___CH__CH2__SO3H
       Na
          CM
                5
          CRN 79-41-4
          CMF C4 H6 O2
 СH2
Me_U_СО2H
     106704-61-4 HCAPLUS
RN
     2\text{-Propenoic acid}, 2\text{-methyl-}, polymer with potassium
     \hbox{2-methyl--2-propenoate and sodium $2$-propene-1-sulfonate, compd.}\\
     with 2-aminoethanol (9CI) (CA INDEX NAME)
     CM
        1
     CRN 141-43-5
     CMF C2 H7 N O
 H2N_CH2_CH2_OH
     CM
         2
     CRN 106704-59-0
     CMF (C4 H6 O2 . C4 H6 O2 . C3 H6 O3 S . K . Na) x
     CCI PMS
```

CRN 6900-35-2 CMF C4 H6 O2 . K

```
\mathbf{Me}_{\mathsf{Me}} = \mathbf{U}_{\mathsf{CO2H}}^{\mathsf{CH2}}
```

■ K

CM 4

CRN 2495-39-8 CMF C3 H6 O3 S . Na

H2C\_\_\_CH\_\_CH2\_\_SO3H

Na Na

CM 5

CRN 79-41-4 CMF C4 H6 O2

RN 106704-62-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with potassium 2-methyl-2-propenoate and potassium 2-propene-1-sulfonate, compd. with 1-butanamine, 1,2-ethanediamine and 1,3-propanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 109-76-2 CMF C3 H10 N2

H2N\_CH2\_CH2\_CH2\_NH2

CM 2

CRN 109-73-9 CMF C4 H11 N

H3C\_CH2\_CH2\_CH2\_NH2

```
CM 3

CRN 107-15-3

CMF C2 H8 N2
```

H2N\_CH2\_CH2\_NH2



left K

$$_{\mathrm{H_2C}}$$
 CH\_CH<sub>2</sub>  $_{\mathrm{SO_3H}}$ 

● K

```
106704-64-7 HCAPLUS
CN
     Butanedioic acid, methylene-, polymer with potassium
     2-methyl-2-propenoate and potassium 2-propene-1-sulfonate, compd.
     with 1,2-ethanediamine (9CI) (CA INDEX NAME)
     CM
        1
     CRN 107-15-3
     CMF C2 H8 N2
 H2N_CH2_CH2_NH2
     CM
        2
     CRN 106704-63-6
         (C5 H6 O4 . C4 H6 O2 . C3 H6 O3 S . 2 K)x
     CCI PMS
               3
          CM
          CRN 6900-35-2
          CMF C4 H6 O2 . K
    CH<sub>2</sub>
 Me_U_CO2H
    ● K
          CM
               4
          CRN 3934-13-2
          CMF C3 H6 O3 S . K
 H2C___CH_CH2_SO3H
        left \mathbb{K}
               5
          CM
          CRN 97-65-4
          CMF C5 H6 O4
 но2с_____Сн2__со2н
```

```
RN
    106704-66-9 HCAPLUS
    2-Butenoic acid, polymer with potassium 2-methyl-2-propenoate and
CN
    potassium 2-propene-1-sulfonate, compd. with 1,2-ethanediamine
     (9CI) (CA INDEX NAME)
    CM 1
    CRN 107-15-3
    CMF C2 H8 N2
 H2N-CH2-CH2-NH2
    CM 2
    CRN 106704-69-2
    CMF
         (C4 H6 O2 . C4 H6 O2 . C3 H6 O3 S . 2 K)x
    CCI PMS
         CM
              3
         CRN 6900-35-2
         CMF C4 H6 O2 . K
    CH2
 Me_U_CO2H
         CM
             4
         CRN 3934-13-2
         CMF C3 H6 O3 S . K
 H2C___CH_CH2_SO3H
       ● K
              5
         CM
         CRN 3724-65-0
         CMF C4 H6 O2
```

 $\texttt{Me} \underline{\hspace{0.4cm}} \texttt{CH} \underline{\hspace{0.4cm}} \texttt{CH} \underline{\hspace{0.4cm}} \texttt{CO2H}$ 

```
RN
     106704-68-1 HCAPLUS
     2-Butenoic acid, polymer with potassium 2-methyl-2-propenoate,
CN
     compd. with 1,3-propanediamine (9CI) (CA INDEX NAME)
    CM
        1
    CRN 109-76-2
     CMF C3 H10 N2
 H2N_CH2_CH2_CH2_NH2
    CM 2
    CRN 106704-67-0
     CMF
         (C4 H6 O2 . C4 H6 O2 . K)x
    CCI PMS
               3
         CM
         CRN 6900-35-2
          CMF C4 H6 O2 . K
    CH<sub>2</sub>
Me_U_CO2H
   left K
               4
          CM
          CRN 3724-65-0
          CMF C4 H6 O2
 Me__CH___CH__CO2H
RN
    106704-70-5 HCAPLUS
    2-Butenoic acid, polymer with potassium 2-methyl-2-propenoate and
    potassium 2-propene-1-sulfonate, compd. with 2-aminoethanol (9CI)
     (CA INDEX NAME)
    CM 1
    CRN 141-43-5
     CMF C2 H7 N O
 H2N_CH2_CH2_OH
```

```
CM 2
    CRN 106704-69-2
    CMF (C4 H6 O2 . C4 H6 O2 . C3 H6 O3 S . 2 K)\mathbf{x}
    CCI PMS
         CM
              3
         CRN 6900-35-2
         CMF C4 H6 O2 . K
Me_U_CO2H
   ■ K
         CM
         CRN 3934-13-2
         CMF C3 H6 O3 S . K
H2C___CH__CH2__SO3H
       lacksquare \mathbb{K}
         CM
              5
         CRN 3724-65-0
         CMF C4 H6 O2
Me_CH__CH__CO2H
    106704-72-7 HCAPLUS
    2-Propenoic acid, 2-methyl-, polymer with potassium
    \hbox{2-methyl-2-propenoate, potassium $2$-propene-1-sulfonate and}\\
    2-propenoic acid, compd. with 1,2-ethanediamine (9CI) (CA INDEX
    NAME)
    CM 1
    CRN 107-15-3
    CMF C2 H8 N2
```

H 2 N \_ C H 2 \_ C H 2 \_ N H 2

CM 2

CRN 106704-71-6

CMF (C4 H6 O2 . C4 H6 O2 . C3 H6 O3 S . C3 H4 O2 . 2 K)x

CCI PMS

CM 3

CRN 6900-35-2

CMF C4 H6 O2 . K

```
RN
     106704-74-9 HCAPLUS
     Butanedioic acid, methylene-, polymer with potassium \,
СИ
     \hbox{2-methyl-2-propenoate, potassium $2$-propene-1-sulfonate and}\\
     2-propenoic acid, compd. with 1,3-propanediamine (9CI) (CA INDEX
     NAME)
     CM
          1
     CRN 109-76-2
     CMF C3 H10 N2
 H2N_CH2_CH2_CH2_NH2
     CM
          2
     CRN 106704-73-8
          (C5 H6 O4 . C4 H6 O2 . C3 H6 O3 S . C3 H4 O2 . 2 K) x
     CMF
     CCI PMS
                3
          CM
          CRN 6900-35-2
          CMF C4 H6 O2 . K
    CH2
 Me_U_CO2H
    \bigcirc K
                4
          CM
          CRN 3934-13-2
          CMF C3 H6 O3 S . K
 H2C___CH__CH2__SO3H
        left \mathbb{K}
                5
          CM
          CRN 97-65-4
          CMF C5 H6 O4
```

CM 4

CRN 3934-13-2

CMF C3 H6 O3 S . K

```
H2C___CH__CH2__SO3H
        K
          CM
               5
          CRN 3724-65-0
          CMF C4 H6 O2
 Me_CH__CH__CO2H
          CM
              6
          CRN 79-10-7
          CMF C3 H4 O2
 но_Щ_сн__сн<sub>2</sub>
RN 106704-78-3 HCAPLUS
     2-Propenoic acid, 2-methyl-, potassium salt, polymer with
CN
     2-propenoic acid, compd. with 1-butanamine (9CI) (CA INDEX NAME)
     CM 1
     CRN 109-73-9
     CMF C4 H11 N
 H3C_CH2_CH2_CH2_NH2
     CM 2
     CRN 106704-77-2
CMF (C4 H6 O2 . C3 H4 O2 . K)x
CCI PMS
          CM
               3
          CRN 6900-35-2
          CMF C4 H6 O2 . K
```

```
CH<sub>2</sub>
 Me_U_CO2H
    K
               4
          CM
          CRN 79-10-7
          CMF C3 H4 O2
 но_й_сн_сн2
     106704-80-7 HCAPLUS
CN
     2-Butenoic acid, polymer with 2-methyl-2-propenoic acid, potassium
     \hbox{2-methyl--2-propenoate, potassium $2$-propene-1-sulfonate and}\\
     2-propenoic acid, compd. with 1-butanamine (9CI) (CA INDEX NAME)
     CM
          1
     CRN 109-73-9
     CMF C4 H11 N
 H3C_CH2_CH2_CH2_NH2
     СМ
          2
     CRN 106704-79-4
     \tt CMF (C4 H6 O2 . C4 H6 O2 . C4 H6 O2 . C3 H6 O3 S . C3 H4 O2 . 2
          K)x
     CCI PMS
               3
          CM
          CRN 6900-35-2
          CMF C4 H6 O2 . K
          CM
          CRN 3934-13-2
```

CMF C3 H6 O3 S . K

H2C\_\_\_CH\_\_CH2\_\_SO3H

K

CM 5

CRN 3724-65-0 CMF C4 H6 O2

 $\texttt{Me} \underline{\hspace{0.5cm}} \texttt{CH} \underline{\hspace{0.5cm}} \texttt{CH} \underline{\hspace{0.5cm}} \texttt{CO2H}$ 

CM 6

CRN 79-41-4 CMF C4 H6 O2

$$_{\text{Me}}$$

CM 7

CRN 79-10-7 CMF C3 H4 O2

RN 106704-82-9 HCAPLUS

CN Butanedioic acid, methylene-, polymer with 2-methyl-2-propenoic acid, potassium 2-methyl-2-propenoate and sodium 2-propene-1-sulfonate, compd. with 1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 107-15-3 CMF C2 H8 N2

H2N\_CH2\_CH2\_NH2

```
CM 2
   CRN 106704-81-8 CMF (\mbox{C5} H6 O4 . C4 H6 O2 . C4 H6 O2 . C3 H6 O3 S . K . Na)x
   CCI PMS
        CM
             3
        CRN 6900-35-2
        CMF C4 H6 O2 . K
   CH2
Me_U_CO2H
  ● K
        CM 4
        CRN 2495-39-8
        CMF C3 H6 O3 S . Na
H2C___CH__CH2__SO3H
      Na
        CM 5
        CRN 97-65-4
        CMF C5 H6 O4
     CH2
но2С_€_Сн2_Со2Н
        CM 6
        CRN 79-41-4
        CMF C4 H6 O2
СН2
Ме_Ц_СО2Н
```

```
CN
        2\text{-Propenoic acid}, 2\text{-methyl-}, potassium salt, polymer with
        \hbox{2-propenoic acid and potassium 2-propene-1-sulfonate, compd. with}\\
        1-butanamine, 1,2-ethanediamine and 1,3-propanediamine (9CI) (CA
        INDEX NAME)
        CM
                1
        CRN 109-76-2
        CMF C3 H10 N2
  \texttt{H}\,\texttt{2}\,\texttt{N}\, \underline{\hspace{1pt}}\,\texttt{C}\,\texttt{H}\,\texttt{2}\,\underline{\hspace{1pt}}\,\texttt{C}\,\texttt{H}\,\texttt{2}\,\underline{\hspace{1pt}}\,\texttt{C}\,\texttt{H}\,\texttt{2}\,\underline{\hspace{1pt}}\,\texttt{C}\,\texttt{H}\,\texttt{2}\,\underline{\hspace{1pt}}\,\texttt{N}\,\texttt{H}\,\texttt{2}
                 2
        CM
        CRN 109-73-9
        CMF C4 H11 N
  H3C_CH2_CH2_CH2_NH2
                 3
        CM
        CRN 107-15-3
        CMF C2 H8 N2
  H2N_CH2_CH2_NH2
        CM 4
        CRN 106704-52-3
        CMF (C4 H6 O2 . C3 H6 O3 S . C3 H4 O2 . 2 K) \times
        CCI PMS
                 CM
                          5
                 CRN 6900-35-2
                 CMF C4 H6 O2 . K
       CH<sub>2</sub>
  Me_C_CO2H
```

CM 6

```
CRN 3934-13-2
          CMF C3 H6 O3 S . K
 H2C___CH__CH2__SO3H
        left \mathbb{K}
               7
          CM
          CRN 79-10-7
          CMF C3 H4 O2
 но_ Ё_сн__сн2
RN
    106705-05-9 HCAPLUS
     2-Propenoic acid, 2-methyl-, potassium salt, polymer with
     2-propenoic acid and potassium 2-propene-1-sulfonate, compd. with
     1,2-ethanediamine (9CI) (CA INDEX NAME)
     CM 1
     CRN 107-15-3
     CMF C2 H8 N2
 H 2 N __ C H 2 __ C H 2 __ N H 2
     CM 2
     CRN 106704-52-3
     CMF (C4 H6 O2 . C3 H6 O3 S . C3 H4 O2 . 2 K) \times
     CCI PMS
          CM
               3
          CRN 6900-35-2
          CMF C4 H6 O2 . K
 Me_C_CO2H
```

CM 4

```
CRN 3934-13-2
           CMF C3 H6 O3 S . K
 H2C___CH__CH2__SO3H
         K
                 5
           CM
           CRN 79-10-7
           CMF C3 H4 O2
 но_й_сн_сн2
     106705-06-0 HCAPLUS
     2-Propenoic acid, 2-methyl-, potassium salt, polymer with 2-propenoic acid and sodium 2-propene-1-sulfonate, compd. with
CN
     1,2-ethanediamine (9CI) (CA INDEX NAME)
     CM
          1
     CRN 107-15-3
     CMF C2 H8 N2
 H 2 N __ C H 2 __ C H 2 __ N H 2
     CM
          2
     CRN 107679-83-4
     CMF
           (C4 H6 O2 . C3 H6 O3 S . C3 H4 O2 . K . Na) x
     CCI PMS
           CM
                  3
           CRN 6900-35-2
           CMF C4 H6 O2 . K
     CH<sub>2</sub>
```

```
CM
              4
          CRN 2495-39-8
          CMF C3 H6 O3 S . Na
 H2C___CH__CH2__SO3H
       Na
          CM
               5
          CRN 79-10-7
CMF C3 H4 O2
 HO_U_CH__CH2
     106705-07-1 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, potassium salt, polymer with
CN
     2-propenoic acid, compd. with 1,2-ethanediamine (9CI) (CA INDEX
     NAME)
     CM 1
     CRN 107-15-3
     CMF C2 H8 N2
 H2N_CH2_CH2_NH2
     CM 2
     CRN 106704-77-2
CMF (C4 H6 O2 . C3 H4 O2 . K)x
     CCI PMS
               3
          CM
          CRN 6900-35-2
          CMF C4 H6 O2 . K
    CH2
 Me_C_CO2H
```

left  $\mathbb{K}$ 

```
CM
               4
          CRN 79-10-7
          CMF C3 H4 O2
 но_Ё_сн__сн2
     106705-08-2 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, potassium salt, polymer with
CN
     potassium 2-propene-1-sulfonate and 2-propenoic acid, compd. with
     1-butanamine (9CI) (CA INDEX NAME)
     CM
     CRN 109-73-9
     CMF C4 H11 N
 H3C_CH2_CH2_CH2_NH2
     CM
     CRN 106704-52-3
         (C4 H6 O2 . C3 H6 O3 S . C3 H4 O2 . 2 K)x
     CMF
     CCI PMS
          CM
               3
          CRN 6900-35-2
          CMF C4 H6 O2 . K
    CH2
    left \mathbb{K}
          CM
               4
          CRN 3934-13-2
          CMF C3 H6 O3 S . K
 H2C___CH__CH2__SO3H
        lacksquare K
```

```
CM
          CRN 79-10-7
          CMF C3 H4 O2
 но_й_сн_сн2
     106726-04-9 HCAPLUS
RN
CN
     Butanedioic acid, methylene-, polymer with potassium
     2-methyl-2-propenoate and sodium 2-propene-1-sulfonate, compd.
     with 1,3-propanediamine (9CI) (CA INDEX NAME)
     CM
         1
     CRN 109-76-2
     CMF C3 H10 N2
 H2N-CH2-CH2-CH2-NH2
        2
     CM
     CRN 106726-03-8
     CMF (C5 H6 O4 . C4 H6 O2 . C3 H6 O3 S . K . Na) x
     CCI PMS
          CM
               3
          CRN 6900-35-2
          CMF C4 H6 O2 . K
    CH<sub>2</sub>
 Me_U_CO2H
    left \mathbb{K}
          CM
               4
          CRN 2495-39-8
          CMF C3 H6 O3 S . Na
 H2C___CH__CH2__SO3H
       Na
```

```
5
         CM
         CRN 97-65-4
         CMF C5 H6 O4
 но2С____СН2__СО2Н
   106726-05-0 HCAPLUS
RN
CN
    Butanedioic acid, methylene-, polymer with potassium
     \hbox{2-methyl-2-propenoate and potassium $2$-propene-1-sulfonate, compd.}
     with 2-aminoethanol and 1-butanamine (9CI) (CA INDEX NAME)
     CM
        1
     CRN 141-43-5
     CMF C2 H7 N O
 H2N_CH2_CH2_OH
     CM 2
     CRN 109-73-9
     CMF C4 H11 N
 H3C_CH2_CH2_CH2_NH2
     CM 3
    CRN 106704-63-6
     CMF (C5 H6 O4 . C4 H6 O2 . C3 H6 O3 S . 2 K) \times
     CCI PMS
         CM
               4
         CRN 6900-35-2
         CMF C4 H6 O2 . K
    CH2
 Me_C_CO2H
```

left  $\mathbb{K}$ 

```
CM
          CRN 3934-13-2
          CMF C3 H6 O3 S . K
 H2C___CH__CH2__SO3H
        left \mathbb{K}
          CM
          CRN 97-65-4
          CMF C5 H6 O4
       CH2
 но2С___Сн2__Со2н
RN
     106726-07-2 HCAPLUS
     Butanedioic acid, methylene-, polymer with 2-methyl-2-propenoic
CN
     acid, potassium 2-methyl-2-propenoate, potassium
     2\text{-propene-}1\text{-sulfonate},\ 2\text{-propenoic acid and sodium}
     2-propene-1-sulfonate, compd. with 1,2-ethanediamine (9CI) (CA
     INDEX NAME)
     CM
         1
     CRN 107-15-3
     CMF C2 H8 N2
 H 2 N __ C H 2 __ C H 2 __ N H 2
     CM 2
     CRN 106726-06-1
     \mbox{CMF} (C5 H6 O4 . C4 H6 O2 . C4 H6 O2 . C3 H6 O3 S . C3 H6 O3 S .
          C3 H4 O2 . 2 K . Na)x
     CCI PMS
          CM
                3
          CRN 6900-35-2
          CMF C4 H6 O2 . K
```

CM 7

```
CM
          CRN 79-10-7
          CMF C3 H4 O2
 но_Ŭ_сн__сн<sub>2</sub>
     106726-08-3 HCAPLUS
RN
CN
     2-Propenoic acid, 2-methyl-, potassium salt, polymer with
     potassium 2-propene-1-sulfonate and 2-propenoic acid, compd. with
     1,2-ethanediamine and 1,3-propanediamine (9CI) (CA INDEX NAME)
     CM
          1
     CRN 109-76-2
     CMF C3 H10 N2
 H2N-CH2-CH2-CH2-NH2
         2
     CM
     CRN 107-15-3
     CMF C2 H8 N2
 H 2 N __ C H 2 __ C H 2 __ N H 2
     CM 3
     CRN 106704-52-3
     CMF (C4 H6 O2 . C3 H6 O3 S . C3 H4 O2 . 2 K)x
     CCI PMS
          CM
                4
          CRN 6900-35-2
          CMF C4 H6 O2 . K
    CH<sub>2</sub>
 Me_U_CO2H
    left K
```

```
CM
               5
           CRN 3934-13-2
CMF C3 H6 O3 S . K
 H2C___CH__CH2__SO3H
        lacksquare \mathbb{K}
           CM
           CRN 79-10-7
CMF C3 H4 O2
 но_ Ё_ сн__ сн2
     106771-12-4 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, potassium salt, polymer with
CN
     2-propenoic acid, compd. with 1-butanamine and 1,2-ethanediamine
     (9CI) (CA INDEX NAME)
     CM 1
     CRN 109-73-9
     CMF C4 H11 N
 H3C_CH2_CH2_CH2_NH2
     CM 2
     CRN 107-15-3
     CMF C2 H8 N2
 H 2 N __ C H 2 __ C H 2 __ N H 2
     CM 3
     CRN 106704-77-2
     CMF (C4 H6 O2 . C3 H4 O2 . K)x
     CCI PMS
                4
           CM
           CRN 6900-35-2
```

CMF C4 H6 O2 , K

```
Me_U_CO2H
```

● K

CM 5

CRN 79-10-7 CMF C3 H4 O2



```
ICM A61K031-785
IC
ICA G01N033-48
CC
    63-5 (Pharmaceuticals)
    106704-53-4P 106704-54-5P
    106704-56-72
                   106704-58-99
    106704-60-3P 106704-61-4P
    106704-62-59 106704-64-79
    106704-66-99 106704-68-19
    106704-70-59 106704-72-79
    106704-74-99 106704-76-19
    106704-78-39 106704-80-79
    106704-82-99 106704-83-09
    106705-05-99
                 106705-06-0P
    106705-07-19
                  106705-08-29
    106726-04-99
                   106726-05-09
    106726-07-2P
                   106725-08-32
    106771-12-4P
    RL: THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); USES (Uses)
        (preparation of, as anticoagulant)
```

L83 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 1986:150894 HCAPLUS Full-text

DOCUMENT NUMBER: 104:150894

ORIGINAL REFERENCE NO.: 104:23889a,23892a

TITLE: Dispersants for inorganic pigments

INVENTOR(S):
Kanemori, Masao; Goto, Masao

PATENT ASSIGNEE(S): Sanyo Chemical Industries Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60181167	А	19850914	JP 1984-38944	
				1984
				0229

PRIORITY APPLN, INFO,:

JP 1984-38944

1984 0229

<--Entered STN: 03 May 1986 ED AΒ A dispersant for an inorg. pigment, giving a storage-stable aqueous coating, comprises a water- soluble (meth)acrylic acid (salt) copolymer containing 0.5-50% sulfosuccinic acid (meth)allyl ester (salt). Thus, 242.6 g 40% aqueous solution of 8:2 mol ratio acrylic acid-lauryl allyl sulfosuccinate ammonium salt copolymer was mixed with 500 g CaCO3 (average diameter  $0.15~\mu$ ) to give a 68% aqueous dispersion exhibiting viscosity 300 cP initially and 310 cP after 3 days, compared with 15000 and 18000 cP, resp., when poly(acrylic acid) was used as a dispersant. 101124-84-9 101124-87-2 101124-90-7 101124-93-0 101124-97-4 101222-33-7 101223-33-0 RL: USES (Uses)

(dispersants, for inorg. pigments, in manufacture of storage-stable aqueous coatings) 101124-84-9 HCAPLUS

CN Butanedioic acid, methylene-, polymer with C-ethyl C-2-propenyl sulfobutanedioate and 2-propenoic acid, sodium salt (9CI) INDEX NAME)

CM 1 CRN 101124-83-8 CMF (C9 H14 O7 S . C5 H6 O4 . C3 H4 O2) $\times$ CM2 CRN 97-65-4

CH2 HO2C\_U\_CH2\_CO2H

RN

CM 3 CRN 79-10-7 CMF C3 H4 O2

CMF C5 H6 O4

но\_ - Сн\_\_ Сн2

4 CM CRN 101124-82-7 CMF C9 H14 O7 S CCI IDS 5 CMCRN 5138-18-1 CMF C4 H6 O7 S

```
SO3H
 но2С_Сн_Сн2_Со2Н
                    CM 6
                   CRN 107-18-6
CMF C3 H6 O
 \texttt{H}\, 2\, \texttt{C} \underline{\qquad}\, \texttt{C}\, \texttt{H}\, \underline{\qquad}\, \texttt{C}\, \texttt{H}\, 2\underline{\qquad}\, \texttt{O}\, \texttt{H}
                   CM 7
                    CRN 64-17-5
                    CMF C2 H6 O
 Н3С_СН2_ОН
     101124-87-2 HCAPLUS
RN
      Butanedioic acid, methylene-, polymer with C-butyl
      C-(2-methy1-2-propeny1) sulfobutanedioate and 2-propenoic acid,
      sodium salt (9CI) (CA INDEX NAME)
      CM 1
      CRN 101124-86-1
      CMF (C12 H20 O7 S . C5 H6 O4 . C3 H4 O2)\times
      CCI PMS
             CM
                  2
             CRN 97-65-4
             CMF C5 H6 O4
        CH2
 но2с_____сн2__со2н
             CM 3
             CRN 79-10-7
             CMF C3 H4 O2
 но_Ё_сн__сн₂
```

```
CM 4
        CRN 101124-85-0
        CMF C12 H20 O7 S
        CCI IDS
             CM 5
             CRN 5138-18-1
             CMF C4 H6 O7 S
     SO3H
но2с_Ен_сн2_со2н
             CM 6
             CRN 513-42-8
CMF C4 H8 O
СH2
Н3С____СH2__ ОН
             CM 7
             CRN 71-36-3
             CMF C4 H10 O
H3C_CH2_CH2_CH2_OH
  101124-90-7 HCAPLUS
   Butanedioic acid, methylene-, C-(2-methyl-2-propenyl) C-octyl
   sulfobutanedioate and 2-propenoic acid, ammonium salt (9CI) (CA
   INDEX NAME)
   CM 1
   CRN 101124-89-4
   CMF (C16 H28 O7 S . C5 H6 O4 . C3 H4 O2)x
   CCI PMS
        CM
             2
        CRN 97-65-4
        CMF C5 H6 O4
```

CM 3

CRN 79-10-7 CMF C3 H4 O2

CM 4

CRN 101124-88-3 CMF C16 H28 O7 S

CCI IDS

CM 5

CRN 5138-18-1 CMF C4 H6 O7 S

CM 6

CRN 513-42-8 CMF C4 H8 O

CM 7

CRN 111-87-5 CMF C8 H18 O

HO\_ (CH2)7\_Me

RN 101124-93-0 HCAPLUS CN Butanedioic acid, methylene-, polymer with C-(phenylmethyl)

```
\hbox{C-$2$-propenyl sulfobutanedioate and $2$-propenoic acid, so dium salt}\\
    (9CI) (CA INDEX NAME)
    CM 1
    CRN 101124-92-9
    CMF (C14 H16 O7 S . C5 H6 O4 . C3 H4 O2)x
    CCI PMS
         CM
               2
         CRN 97-65-4
         CMF C5 H6 O4
      CH2
но2С_____Сн2__Со2Н
         CM
             3
         CRN 79-10-7
         CMF C3 H4 O2
         CM 4
         CRN 101124-91-8
         CMF C14 H16 O7 S
         CCI IDS
               CM 5
               CRN 5138-18-1
               CMF C4 H6 O7 S
     SO3H
но2с_сн_сн2_со2н
               CM 6
               CRN 107-18-6
               CMF C3 H6 O
H_2C \longrightarrow CH \longrightarrow CH_2 \longrightarrow OH
```

```
CM 7
                CRN 100-51-6
                CMF C7 H8 O
 HO_CH2_Ph
   101124-97-4 HCAPLUS
RN
CN
     Butanedioic acid, methylene-, polymer with
     \alpha-[1,4-dioxo-4-(2-propenyloxy)sulfobutyl]-\omega-
     (octyloxy) poly(oxy-1,2-ethanediyl) and 2-propenoic acid, sodium
     salt (9CI) (CA INDEX NAME)
     CM 1
     CRN 101311-06-2
     CMF (C5 H6 O4 . C3 H4 O2 . (C2 H4 O)n C15 H26 O7 S)x
     CCI PMS
          CM
                2
          CRN 97-65-4
          CMF C5 H6 O4
       CH2
 но<sub>2</sub>с_<u>Ü</u>_сн<sub>2</sub>_со<sub>2</sub>н
              3
          CM
          CRN 79-10-7
          CMF C3 H4 O2
 но_ Ё_ сн__ сн_
          CM
          CRN 101311-05-1
          CMF (C2 H4 O)n C15 H26 O7 S
          CCI IDS, PMS
                CM 5
                CRN 27252-75-1
                CMF (C2 H4 O)n C8 H18 O CCI PMS
```

CM 6

CRN 5138-18-1 CMF C4 H6 O7 S

CM 7

CRN 107-18-6 CMF C3 H6 O

RN 101222-33-7 HCAPLUS

CN Butanedioic acid, methylene-, polymer with C-butyl C-2-propenyl sulfobutanedioate and 2-propenoic acid, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 101222-32-6

CMF (C11 H18 O7 S . C5 H6 O4 . C3 H4 O2)x CCI PMS

2 CM

CRN 97-65-4 CMF C5 H6 O4

CM 3

CRN 79-10-7 CMF C3 H4 O2

```
CM
            4
        CRN 101222-29-1
        CMF C11 H18 O7 S
        CCI IDS
             CM
                  5
             CRN 5138-18-1
             CMF C4 H6 O7 S
     S03H
но2с_сн_сн2_со2н
             CM 6
             CRN 107-18-6
             CMF C3 H6 O
Н 2 С ___ СН _ СН 2 _ ОН
             CM 7
             CRN 71-36-3
             CMF C4 H10 O
H3C_CH2_CH2_CH2_OH
   101223-33-0 HCAPLUS
   Butanedioic acid, methylene-, polymer with C-dodecyl C-2-propenyl
   sulfobutanedioate and 2-propenoic acid, ammonium salt (9CI) (CA
   INDEX NAME)
   CM 1
   CRN 101223-32-9
   CMF (C19 H34 O7 S . C5 H6 O4 . C3 H4 O2)x
   CCI PMS
        CM
             2
        CRN 97-65-4
        CMF C5 H6 O4
сн2
но2с_∉_сн2_со2н
```

```
CM
               3
         CRN 79-10-7
         CMF C3 H4 O2
 но_й_сн_сн₂
         СМ
         CRN 101223-31-8
         CMF C19 H34 O7 S
         CCI IDS
               CM
                   5
               CRN 5138-18-1
               CMF C4 H6 O7 S
      S03H
 но2с_сн_сн2_со2н
               CM
                   6
               CRN 112-53-8
               CMF C12 H26 O
 HO_ (CH2)11_Me
               CM 7
               CRN 107-18-6
               CMF C3 H6 O
 Н2С___СН__СН2__ОН
    ICM C09C003-10
IC
ICA C08L033-04
     42-6 (Coatings, Inks, and Related Products)
     acrylic acid copolymer dispersant pigment; allyl
     sulfosuccinate copolymer dispersant pigment; calcium
     carbonate dispersant aq coating
ΙT
    Dispersing agents
        ((meth)allyl sulfosuccinate copolymers, for inorg. pigments, in
```

```
manufacture of storage-stable aqueous coatings)
    Kaolin, uses and miscellaneous
ΤТ
     RL: USES (Uses)
        (dispersants for, (meth)acrylic acid copolymers as,
        in manufacture of storage-stable aqueous coatings)
TT
     Piaments
        (inorg., dispersants for, methacrylic acid copolymers
       as, in manufacture of storage-stable aqueous coatings)
     471-34-1, uses and miscellaneous
TT
     RL: USES (Uses)
        (dispersants for, (meth)acrylic acid copolymers as,
        in manufacture of storage-stable aqueous coatings)
     101124-84-9 101124-87-2
TT
     101124-90-7 101124-93-0 101124-97-4
     101150-91-8 101222-31-5 101222-33-7 101222-35-9
     101223-33-0 101311-43-7
     RL: USES (Uses)
        (dispersants, for inorg. pigments, in manufacture of
        storage-stable aqueous coatings)
L83 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1982:7631 HCAPLUS Full-text
DOCUMENT NUMBER:
                        96:7631
ORIGINAL REFERENCE NO.: 96:1389a,1392a
TITLE:
                       Interfacial crosslinking of latex films
INVENTOR(S):
                       Moore, Carl; Kirchoff, Robert A.
PATENT ASSIGNEE(S): Moore, Carl, Kircholl
Dow Chemical Co., USA
SOURCE:
                       U.S., 11 pp.
                        CODEN: USXXAM
DOCUMENT TYPE:
                        Patent
LANGUAGE:
                        English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
    PATENT NO. KIND DATE APPLICATION NO.
                                                                 DATE
                                           _____
     US 4293476
                    A 19811006 US 1979-63279
                                                                  1979
                                                                  0802
                                              <--
PRIORITY APPLN. INFO.:
                                           US 1979-63279
                                                                  1979
                                                                  0802
                                              <--
ED
    Entered STN: 12 May 1984
AB
     Strong, water-resistant films are prepared from aqueous dispersions of polymer
     particles having a high concentration of reactive groups on their surface, and %20-
     soluble compds. reactive with these groups. Thus, adding styrene 52, butadiene 28, and
     C12H25SH 0.2 part and AIBN 0.25, C12H25C6H4CH2SMe2+ C1- (I) 1, and H2O 63 parts over 5
     h to AIBN 0.4, I 1, and H2O 142 parts stirred at 75^{\circ}, stirring 3.5 h, adding butadiene
     7, styrene 3, and ClCH2C6H4CH:CH2 10 parts over 2 h, and stirring 3 h at 75° gives a
     38.3% copolymer [55844-89-8] latex, number-average particle size 1340 Å. Stirring this
     latex 125.5, polyethylenimine [9002-98-6] (number-average mol. weight 40,000) 0.9, and
     C9H19C6H4(OCH2CH2)nOH 1.5 part, drying a film, and baking 5 min at 120° gives a film
     with tensile strength 164 kg/cm2 and elongation 346%, compared with 65 and 520, resp.,
     without crosslinking.
    141-43-5, reactions
TΤ
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (crosslinking by, of polymer latexes, interfacial)
```

141-43-5 HCAPLUS

Ethanol, 2-amino- (CA INDEX NAME)

RN

CN

H2N\_CH2\_CH2\_OH

```
ΙT
     80137-64-0
     RL: USES (Uses)
        (graft, latex, interfacial crosslinking of)
RN
     80137-64-0 HCAPLUS
     Butanedioic acid, methylene-, polymer with 1,3-butadiene, butyl
CN
     2-propenoate, (chloromethyl)ethenylbenzene and ethenylbenzene
     (9CI) (CA INDEX NAME)
     CM 1
     CRN 30030-25-2
     CMF C9 H9 C1
CCI IDS
 D1_CH2_Cl
 D1_CH_CH2
     CM 2
     CRN 141-32-2
     CMF C7 H12 O2
 _{n-BuO} CH CH CH2
     CM 3
     CRN 106-99-0
     CMF C4 H6
 H 2 C ___ CH _ CH _ CH 2
     CM 4
     CRN 100-42-5
     CMF C8 H8
 H 2 C____ C H__ Ph
```

CM 5

CRN 97-65-4 CMF C5 H6 O4

СH2 HO2C\_\_\_\_\_СH2\_\_ СО2H

IC C08L051-04

INCL 260029700W

CC 37-6 (Plastics Manufacture and Processing)

IT 100-97-0, reactions 107-15-3, reactions 110-85-0, reactions

112-24-3 141-43-5, reactions 9002-98-6
RL: RCT (Reactant); RACT (Reactant or reagent)

(crosslinking by, of polymer latexes, interfacial)

IT 80137-63-9 80137-64-0

RL: USES (Uses)

(graft, latex, interfacial crosslinking of)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE

THIS RECORD (3 CITINGS)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE

FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L83 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 1978:137999 HCAPLUS Full-text

DOCUMENT NUMBER: 88:137999

ORIGINAL REFERENCE NO.: 88:21703a,21706a

TITLE: Aerobically crosslinkable coating materials

INVENTOR(S): Sunamori, Takashi; Nishii, Noboru PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Fatent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	AP	PLICATION NO.	DATE
	JP 52127989	A	19771027	JP	1976-44637	
						1976
						0419
					<	
	US 4146588	A	19790327	US	1977-786194	
						1977
						0411
					<	
	GB 1535888	A	19781213	GB	1977-15797	
						1977
						0415
					<	
PRIORITY APPLN. INFO.:				JΡ	1976-44637 A	
						1976
						0419
					<	

ED Entered STN: 12 May 1984

AB Aqueous dispersions of Ce(III) compds., chelate-forming compds., SmOn2- (m = 1-6, n = 1-7), and water-soluble or water-dispersible vinyl compds. are stored anaerobically,

applied to a substrate, and crosslinked in air to form coatings. Thus, a composition of an aqueous solution containing 0.99 mol/L acrylamide and 0.01 mol/L N,N'- methylenediacrylamide 98, pyridine [110-86-1] 0.15, acrylic acid 0.15, acetylacetone [123-54-6] 0.20, 0.05 M Ce(NO3)3 in N HNO3, and 5% aqueous Na2SO3 solution 1 mL was stored in N and applied to a rust-covered steel plate through a spray gun. The solution diffused in the rust and gelled quickly to form a copolymer [27791-59-9] coating.

IT 102-71-6, uses and miscellaneous

RL: USES (Uses)

(acrylamide coatings containing cerous compds. and, for aerobic crosslinking)

RN 102-71-6 HCAPLUS

CN Ethanol, 2,2',2''-nitrilotris- (CA INDEX NAME)

IT 66062-73-5

RL: TEM (Technical or engineered material use); USES (Uses) (coatings, containing cerous compds. and chelating agents as crosslinking catalysts)

RN 66062-73-5 HCAPLUS

CN Butanedioic acid, methylene-, polymer with N-(butoxymethyl)-2-propenamide, dodecyl 2-methyl-2-propenate, ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenate, N,N'-methylenebis[2-propenamide] and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 1852-16-0 CMF C8 H15 N O2

CM 2

CRN 868-77-9 CMF C6 H10 O3

CM 3

CRN 142-90-5 CMF C16 H30 O2

$$\text{Me\_(CH2)_{11}\_o\_} \overset{\text{O}}{\text{U}} \overset{\text{CH2}}{\text{U}} \text{Me}$$

CM 4

CRN 110-26-9 CMF C7 H10 N2 O2

$${\tt H_2C\_CH\_} \overset{\circ}{\tt CH\_} {\tt CH\_CH_2\_NH\_} \overset{\circ}{\tt U\_CH\_CH_2} {\tt CH_2}$$

CM 5

CRN 100-42-5 CMF C8 H8

CM 6

CRN 97-65-4 CMF C5 H6 O4

CM 7

CRN 79-06-1 CMF C3 H5 N O

- IC C08F004-12
- CC 42-7 (Coatings, Inks, and Related Products)
- IT 102-71-6, uses and miscellaneous 110-86-1, uses and miscellaneous 123-54-6, uses and miscellaneous 7757-83-7

RL: USES (Uses)

(acrylamide coatings containing cerous compds. and, for aerobic crosslinking)

IT 27791-59-9 66062-73-5 66072-42-2

RL: TEM (Technical or engineered material use); USES (Uses) (coatings, containing cerous compds. and chelating agents as crosslinking catalysts)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE

THIS RECORD (1 CITINGS)

L83 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2009 ACS on STN ACCESSION NUMBER: 1969:462497 HCAPLUS Full-text

DOCUMENT NUMBER: 71:62497
ORIGINAL REFERENCE NO.: 71:11574a

TITLE: Inhibition of the precipitation of metal ions

in aqueous solution

INVENTOR(S): Carter, Richard P., Jr.; Irani, Riyad R.

PATENT ASSIGNEE(S): Monsanto Co. SOURCE: Fr., 9 pp.

CODEN: FRXXAK

PATENT INFORMATION:

PATENT NO.		KIND	DATE	APPLICATION NO.	DATE
FR 1533473			19680719	FR 1967-110549	
					1967
					0615
				<	
DE 1792665				DE	
GB 1168718				GB	
US 3463734			19690826	US	
					1966
					0616
				<	
PRIORITY APPLN.	INFO.:			US	
					1966
					0616
				<	

ED Entered STN: 12 May 1984

AB Poly(itaconic acid) and its ພະເອກ ສວໄໝນີເອ salts were used as sequestering agents in washing composition, containing alkyl-benzenesulfonate detergents, to prevent the precipitation of alkaline earth and transition metal ions. A typical formulation consists of 20% C12H25C6H4SO3Na, 50% poly(Na itaconate), 1% Na CM-cellulose, 10% Na silicate, and 19% Na2SO4, and is used as a cleaning agent and as a dishwashing detergent.

IT 25119-64-6 25609-79-4 25916-37-4

26099-89-8 RL: USES (Uses)

(as chelating agents in detergents)

RN 25119-64-6 HCAPLUS

CN Butanedioic acid, 2-methylene-, homopolymer (CA INDEX NAME)

CM 1

CRN 97-65-4 CMF C5 H6 O4

RN 25609-79-4 HCAPLUS

CN Succinic acid, methylene-, polymers, compd. with

```
2,2',2''-nitrilotriethanol (8CI) (CA INDEX NAME)
    CM 1
    CRN 102-71-6
    CMF C6 H15 N O3
            CH2-CH2-OH
 HO_CH2_CH2_N_CH2_CH2_OH
    CM 2
    CRN 25119-64-6
    CMF (C5 H6 O4)x
    CCI PMS
            3
         CM
         CRN 97-65-4
         CMF C5 H6 O4
     CH2
 HO2C_U_CH2_CO2H
    25916-37-4 HCAPLUS
RN
    Butanedioic acid, methylene-, homopolymer, ammonium salt (9CI)
    (CA INDEX NAME)
    CM 1
    CRN 25119-64-6
    CMF (C5 H6 O4) x
    CCI PMS
         CM 2
         CRN 97-65-4
         CMF C5 H6 O4
      CH2
 но2с___Сн2__со2н
    26099-89-8 HCAPLUS
RN
    Butanedioic acid, 2-methylene-, homopolymer, sodium salt (CA
    INDEX NAME)
    CM 1
    CRN 25119-64-6
    CMF (C5 H6 O4)x
    CCI PMS
         CM
             2
```

CRN 97-65-4 CMF C5 H6 O4

#### FULL SEARCH HISTORY

```
=> d his nofile
     (FILE 'HOME' ENTERED AT 12:10:08 ON 28 SEP 2009)
    FILE 'HCAPLUS' ENTERED AT 12:20:03 ON 28 SEP 2009
               E US20070197747/PN
L1
             1 SEA SPE=ON ABB=ON PLU=ON US20070197747/PN
               D ALL
                SEL RN
                D SCA
    FILE 'REGISTRY' ENTERED AT 12:22:30 ON 28 SEP 2009
L2
            18 SEA SPE=ON ABB=ON PLU=ON (100-60-7/BI OR 102-71-6/BI
                OR 108-91-8/BI OR 109-89-7/BI OR 110-91-8/BI OR
               111-42-2/BI OR 124-30-1/BI OR 124-68-5/BI OR 137107-41-
                6/BI OR 141-43-5/BI OR 35830-10-5/BI OR 471-34-1/BI OR
                534-18-9/BI OR 584-10-1/BI OR 75-04-7/BI OR 864970-32-1
                /BI OR 864970-33-2/BI OR 9003-04-7/BI)
               D SCA
    FILE 'STNGUIDE' ENTERED AT 12:22:49 ON 28 SEP 2009
    FILE 'REGISTRY' ENTERED AT 12:25:30 ON 28 SEP 2009
L3
             2 SEA SPE=ON ABB=ON PLU=ON L2 AND PMS/CI
               D SCA
               D 1-2 CI
    FILE 'LREGISTRY' ENTERED AT 12:26:28 ON 28 SEP 2009
L4
               STR
    FILE 'REGISTRY' ENTERED AT 12:36:09 ON 28 SEP 2009
L5
               SCR 2043
            50 SEA SSS SAM L4
L6
               D QUE STAT
    FILE 'HCAPLUS' ENTERED AT 12:39:15 ON 28 SEP 2009
               D SCA L1
    FILE 'REGISTRY' ENTERED AT 12:39:15 ON 28 SEP 2009
               E 35830-10-5/RN
L7
             1 SEA SPE=ON ABB=ON PLU=ON 35830-10-5/RN, CRN
               D SCA
               E 9003-04-7/RN
             1 SEA SPE=ON ABB=ON PLU=ON 9003-04-7/RN
L8
               D SCA
               D
L9
           947 SEA SPE=ON ABB=ON PLU=ON 9003-01-4/CRN
L10
         70415 SEA SPE=ON ABB=ON PLU=ON 79-10-7/CRN
L11
         70415 SEA SPE=ON ABB=ON PLU=ON (L7 OR L8 OR L9 OR L10)
               D QUE STAT L6
         63799 SEA SSS FUL L4
L12
               SAV TEMP L12 BER519REG/A
               D SAV
        626916 SEA SPE=ON ABB=ON PLU=ON A1/PG
L13
          5826 SEA SPE=ON ABB=ON PLU=ON L12 AND L13
          3961 SEA SPE=ON ABB=ON PLU=ON L12 AND ?AMMONIUM?/CNS
L15
          3901 SEA SPE=ON ABB=ON PLU=ON L12 AND ?AMINE/CNS
L16
         11353 SEA SPE=ON ABB=ON PLU=ON L12 AND ?SALT/CNS
L17
L18
           878 SEA SPE=ON ABB=ON PLU=ON L16 AND L17
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FILE 'REGISTRY' ENTERED AT 13:10:26 ON 28 SEP 2009

L19

FILE 'LREGISTRY' ENTERED AT 12:53:16 ON 28 SEP 2009

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L20
            50 SEA SUB=L12 SSS SAM L4 AND L19
L21
         22190 SEA SUB=L12 SSS FUL L4 AND L19
               SAV TEMP L21 BER519REGA/A
L22
          4666 SEA SPE=ON ABB=ON PLU=ON L15 OR L18
           3023 SEA SPE=ON ABB=ON PLU=ON L16 NOT L18
L23
                SAV TEMP L22 BER519REGB/A
                SAV TEMP L23 BER519REGC/A
     FILE 'HCAPLUS' ENTERED AT 13:14:46 ON 28 SEP 2009
         15704 SEA SPE=ON ABB=ON PLU=ON L21
L24
L25
          4369 SEA SPE=ON ABB=ON PLU=ON L22
L26
          1664 SEA SPE=ON ABB=ON PLU=ON L23
L27
          16554 SEA SPE=ON ABB=ON PLU=ON L24 OR L25
     FILE 'REGISTRY' ENTERED AT 13:16:30 ON 28 SEP 2009
L28
            10 SEA SPE=ON ABB=ON PLU=ON L2 AND N/ELS
               D SCA
     FILE 'HCAPLUS' ENTERED AT 13:19:49 ON 28 SEP 2009
        121064 SEA SPE=ON ABB=ON PLU=ON L28
L29
         16798 SEA SPE=ON ABB=ON PLU=ON L27 OR L26
L30
           329 SEA SPE=ON ABB=ON PLU=ON L29 AND L30
L31
          4618 SEA SPE=ON ABB=ON PLU=ON L25 OR L31
L32
          9577 SEA SPE=ON ABB=ON PLU=ON L14
L33
         13575 SEA SPE=ON ABB=ON PLU=ON L32 OR L33
L34
L35
       117311 SEA SPE=ON ABB=ON PLU=ON L12
L36
          2127 SEA SPE=ON ABB=ON PLU=ON L35 AND L29
               D SCA L1
                E AMINES/CT
        155818 SEA SPE=ON ABB=ON PLU=ON AMINES/CT
L37
L38
           2197 SEA SPE=ON ABB=ON PLU=ON L35 AND L37
           3984 SEA SPE=ON ABB=ON PLU=ON L36 OR L38
L39
                D QUE STAT L33
                D QUE STAT L24
                D QUE STAT L22
           8219 SEA SPE=ON ABB=ON PLU=ON L32 OR L38 OR L39
1.40
                OUE SPE=ON ABB=ON PLU=ON HYDROSOLUBL? OR (HYDRO OR
L41
               WATER OR H2O OR AQUEOUS) (A) SOLUBL?
           912 SEA SPE=ON ABB=ON PLU=ON L40 AND L41
           212 SEA SPE=ON ABB=ON PLU=ON L42 AND L29
L44
           147 SEA SPE=ON ABB=ON PLU=ON L42 AND L33
L45
            338 SEA SPE=ON ABB=ON PLU=ON L43 OR L44
L46
               QUE SPE=ON ABB=ON PLU=ON SUSPEN? OR DISPERS? OR
                COLLOID? OR EMULS? OR MICROEMULS? OR SLURR?
L47
            171 SEA SPE=ON ABB=ON PLU=ON L45 AND L46
                D SCA L1
     FILE 'LREGISTRY' ENTERED AT 13:42:15 ON 28 SEP 2009
L48
              STR L4
     FILE 'REGISTRY' ENTERED AT 13:44:26 ON 28 SEP 2009
L49
           50 SEA SUB=L12 SSS SAM L48
L50
           7985 SEA SUB=L12 SSS FUL L48
               SAV TEMP L23 BER519REGD/A
L51
           766 SEA SPE=ON ABB=ON PLU=ON L50 AND ?SODIUM?/CNS
L52
           7694 SEA SPE=ON ABB=ON PLU=ON L50 AND ACID/CNS
     FILE 'HCAPLUS' ENTERED AT 13:47:37 ON 28 SEP 2009
           726 SEA SPE=ON ABB=ON PLU=ON L51
L53
L54
          13203 SEA SPE=ON ABB=ON PLU=ON L52
             8 SEA SPE=ON ABB=ON PLU=ON L47 AND L53
19 SEA SPE=ON ABB=ON PLU=ON L53 AND L45
23 SEA SPE=ON ABB=ON PLU=ON L54 AND L47
L55
L56
L57
             66 SEA SPE=ON ABB=ON PLU=ON L54 AND L45
L58
    FILE 'REGISTRY' ENTERED AT 13:50:48 ON 28 SEP 2009
L59
           150 SEA SPE=ON ABB=ON PLU=ON L50 AND ?POTASSIUM?/CNS
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	FILE 'HCAP	LUS' ENTERED	AT 13:5	1:18 ON	28 SEP 2009			
L60	124	SEA SPE=ON	ABB=ON	PLU=ON	L59			
L61	1	SEA SPE=ON	ABB=ON	PLU=ON	L60 AND L47			
L62	4	SEA SPE=ON	ABB=ON	PLU=ON	L60 AND L45			
L63	66	SEA SPE=ON	ABB=ON	PLU=ON	(L55 OR L56 OR L57 OR L58)			
			(L61 OR L62)					
L64	13321	SEA SPE=ON	ABB=ON	PLU=ON	L50			
L65	351	SEA SPE=ON	ABB=ON	PLU=ON	L64 AND L29			
L66	16	SEA SPE=ON	ABB=ON	PLU=ON	L65 AND L47			
L67	42	SEA SPE=ON	ABB=ON	PLU=ON	L65 AND L45			
L68	67	SEA SPE=ON	ABB=ON	PLU=ON	L63 OR L66 OR L67			
L69		QUE SPE=ON	ABB=ON	PLU=ON	PY=<2004 NOT $P/DT$			
L70	1	SEA SPE=ON	ABB=ON	PLU=ON	L68 AND L69			
L71		QUE SPE=ON	ABB=ON	PLU=ON	(PY=<2004 OR PRY=<2004 OR			
		AY=<2004 OR	Y=<2004 OR MY=<2004 OR REVIEW/DT) AND P/DT					
L72	44	SEA SPE=ON	ABB=ON	PLU=ON	L68 AND L71			
L73	45	SEA SPE=ON	ABB=ON	PLU=ON	L70 OR L72			
L74	23	SEA SPE=ON	ABB=ON	PLU=ON	L73 AND ((L55 OR L56 OR			
		L57) OR L66	)					
L75	24	SEA SPE=ON	ABB=ON	PLU=ON	L74 OR L70			
		SAV TEMP L7	5 BER519	HCP/A				
		D SCA						
L76	24	SEA SPE=ON	ABB=ON	PLU=ON	L75 AND L41			
		E DISPERSIN	G AGENTS	/CT				
		E E3+ALL						
ь77	25685	SEA SPE=ON	ABB=ON	PLU=ON	DISPERSING AGENTS/CT			
L78	45	SEA SPE=ON	ABB=ON	PLU=ON	L73 AND L41			
L79	3	SEA SPE=ON	ABB=ON	PLU=ON	L78 AND L77			
L80	3	SEA SPE=ON	ABB=ON	PLU=ON	L73 AND L77			
L81	4	SEA SPE=ON	ABB=ON	PLU=ON	L66 AND L77			
L82	0	SEA SPE=ON	ABB=ON	PLU=ON	L81 AND (L69 OR L70)			
L83	28	SEA SPE=ON	ABB=ON	PLU=ON	L76 OR (L79 OR L80 OR L81			
		OR L82)	OR L82)					
		SAV TEMP L8	SAV TEMP L83 BER519HCPA/A					
		D QUE STAT L83						
D L83 1-28 IBIB ED ABS HITSTR HITIND								